

THE *Soybean Digest*

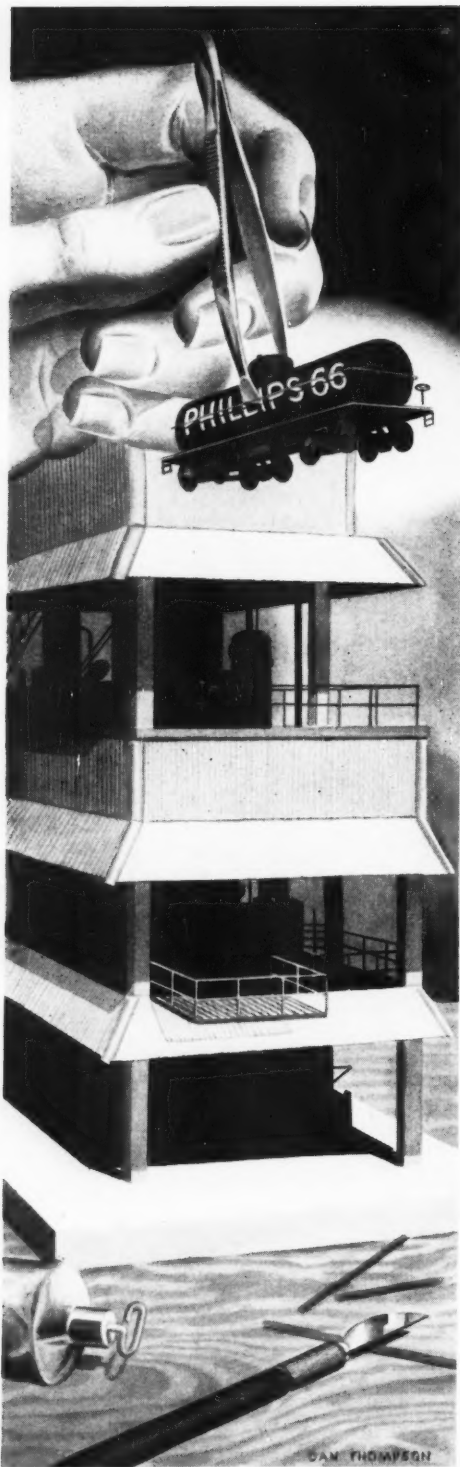


American Soybean Association's President John W. Evans. (See page 27).

Official Publication
AMERICAN SOYBEAN ASSOCIATION

VOLUME 9 • NUMBER 12

OCTOBER • 1949



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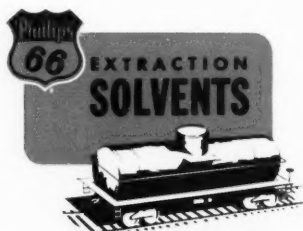
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THE Soybean Digest

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IN THIS ISSUE

	page
Editor's Desk	4
Growers	6
Ontario Sets Soybean Price	6
Extracting Soybean Oil with Trichloroethylene	11
L. K. ARNOLD	
Delphos, Ohio, Meeting	13
Store Soybeans in Flour Mill	13
8 Steps in Soybean Grading	14
Harvest Losses in Soybeans	16
E. L. BARGER AND CHARLES R. WEBER	
Soybeans in Japan	18
T. KURAKAKE	
CROP Campaign Asks Soybeans	20
Kill Margarine Bill	22
October Crop Report	25
Evans Grew First Soybeans in 1917	29
Publications	30
Grits and Flakes	32
Washington Digest	38
PORTER M. HEDGE	
Market Street	39
In the Markets	41
Index to Volume 9	45
Contributors' Index	46

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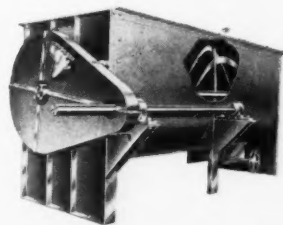
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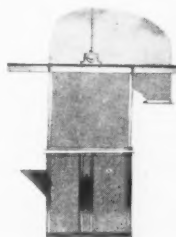
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EDITOR'S DESK

WE CAN LOSE EUROPEAN MARKETS

(Written by Editor Geo. M. Strayer in Germany)

The postwar markets of the world are now opening up to soybeans. European countries are anxious to buy 1949-crop soybeans because they are still the cheapest source of edible oil available at any point in world trade.

The only deterring factor in the entire picture is the shortage of dollar exchange—and the still lower buying power of European currencies since devaluation took place. Now it takes more of any European currency units to buy a bushel of soybeans or a pound of soybean oil meal or oil.

Currency devaluations of foreign powers cannot be controlled by the soybean grower. But there is something the American farmer, the soybean buyer and handler and the grain merchants can do. And it will go far toward maintaining a European market for soybeans over a period of years.

That is the supplying of only superior quality soybeans for export trade. In several cases during the past year beans of extremely low quality have been supplied to Dutch and German oilseed processors. Those lots have tended to brand all U. S. soybeans as decidedly inferior to Manchurian beans—which is definitely not the case. Weed seeds, even seeds of poisonous weeds in which only a small portion of the seed would be fatal, have been included in far too high percentages. Green, immature beans (about 75 percent sound beans, 25 percent green and cracked beans) have been supplied for foods manufacture.

The European countries would appear to have been the dumping ground for off-grade U. S. soybeans, rather than the preferred market they should have been. Such deliveries are already making it hard to sell U. S. soybeans in what should be our logical markets.

No soybeans should leave the farmers' hands containing high percentage of weed seeds, especially poisonous seeds such as jimson weed. Millions of dollars in markets are lost for every dollar gained by such practices.

No soybeans should be allowed to flow into world trade channels from local bean buyers unless they meet U. S. grade standards in every respect.

No soybeans should be loaded into freighter holds by commission firms unless they are far above the grade standards specified, and unless they meet every maximum standard included in the contract. Elevator railroad, vessel loading, vessel unloading—all increase the cracked bean percentage and the foreign material content. Beans meeting standards at country points will not do so at foreign seaport unless a margin of safety is allowed.

We are going to lose our world markets for soybeans—and fast—unless U. S. traders supply the best quality soybeans that are to be secured. Nothing else is good enough at this stage of the game.

Let's—everyone of us supplying beans to world markets—ship the kind of beans we would like to have delivered to us. And let's keep our junk at home for this year! A word to the wise is sufficient!

THE RUN-AROUND AGAIN

Once again leaders in the U. S. Senate have ducked the margarine issue. On Sept. 13, the Senate democratic policy committee voted to take no action during this session on HR 2023, the bill to remove all federal taxes and license fees from margarine.

So once again the drive for margarine repeal—though backed by overwhelming popular support—is stalled. Thus the dreary pattern of 1943—when a margarine bill died in the Senate—is repeated. On the basis of seniority alone—disregarding popular sentiment—the bill was entitled to a vote this session.

In the meantime the policy committee has given positive assurance that HR 2023 will be made the first order of business when Congress reconvenes in January.

Soybean producers will be watching to see whether the Senate leadership makes good its promise to take action of HR 2023, or whether they are treated to another run-around.

In the meantime Ohio voters will have a chance to decide for themselves whether they wish to retain that state's ban on yellow margarine. They go to the polls to vote on the issue Nov. 8.

This will be a highly important election. Much more is at stake than the question of whether Ohio will join the 31 states where yellow margarine is now legal. It will provide the first direct test of popular sentiment on the margarine issue. It is up to Ohio soybean producers to make themselves felt on Nov. 8. The results will have a vital bearing on the chances for repeal of remaining margarine laws elsewhere.

THE SURVIVAL OF THE FITTEST

Soybean bushelage of the 1949 crop will be considerably below last year's levels. Federal estimates (too high by your editor's standards) call for a shrinkage of 16 million bushels from last year.

Acreage is down. Last year's figures were too high. This year there will be, according to our best estimate, about 155 million bushels of soybeans to reach the grain trade.

Solvent processing capacity, including that to be operated for the first time, approaches that figure. On that basis 1949 crop beans could all be processed by solvent plants alone!

Deduct from the 155 million bushels the soybeans that have already been purchased for export together with contemplated exports, and you have a basis on which intense competition between buyers will in all probability develop as the buying season progresses.

Such competition is going to be good for the grower but tough on the processor. The time has come when efficiency of operation—mechanical and financial—will determine which plants survive. Competition will eliminate the less efficient. It will also mean a higher average price for soybeans—1949 crop and later.

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"OVER 800 MILLION DOLLARS WORTH OF PRODUCTS ANALYZED SINCE 1935"

GROWERS

SAYS STORAGE WILL PAY

A University of Illinois economist urges farmers to store their soybeans until next spring and market them at that time, when prices are highest.

If you wait until next spring to sell, the price you get may be enough higher to pay for building a new, permanent soybean storage bin with the first year's crop. And you certainly can pay for it over a period of years with your premiums from selling your beans in the spring.

G. L. Jordan, in the College of Agriculture, says that records from 1931 to 1941 show that soybean prices are highest in the spring or early summer months. The difference between October price and April-May prices average 22 to 27 cents a bushel. This bonus should help to build a good, permanent bin.

Jordan's 10-year figures show that you can gain an average of 15 cents a bushel by holding your beans until January.

With an extreme shortage of storage space this fall, Jordan declares that it may be a pretty wise move to build more of your own storage space. You can probably pay for it in a year or two with the higher prices you receive by selling beans in the spring.

Jordan says there's no reason to expect February price drops in beans like those of the past 2 years. These dips were caused by unusual economic factors. Prices later recovered in both years.

ONTARIO SETS BEAN PRICE

The open market price based on Chicago will apply to Ontario-grown soybeans, according to a recent decision of the arbitration board of the Ontario Soybean Marketing Board, Toronto.

Price Sept. 29 was \$2.33 1/2 per bushel delivered to the country elevator with 1/2c deducted to finance the marketing board. The devaluation of the Canadian dollar raised the price about 15c per bushel.

Other clauses agreed to by processors and producers, which will be enforced by the Marketing Board:

Soybeans containing over 14 percent moisture may be subject to the following discounts from the daily minimum price:

(a) For soybeans containing over 14 percent moisture and up to and including 18 percent moisture, the discount may be 1 1/2 cents per bushel for each half percent moisture content.

(b) For soybeans containing over 18 percent moisture, the discount may be 2 cents per bushel for each half percent moisture content.

The maximum average charge to any grower by every dealer for cleaning, handling, and selling soy beans shall be 10 cents per bushel.

The maximum charge to any grower by every dealer for storing soybeans shall be one twenty-fifth of 1 cent per bushel per day.

In the event there is a dispute between a grower and a dealer as to the grade and moisture content of any load of soybeans, the matter in dispute shall be referred to an inspector for the Board of Grain Commissioner at Chatham, Ontario, and his decision respecting such grade or moisture content shall be final.

The Ontario Soybean Marketing Board was set up under an Ontario law that permits commodity groups to set up their own marketing boards and makes provisions to enforce their regulations.

Members of the negotiating committee of the bean growers were: chairman, John Wilcox; members, Harry Pugh, Chatham; George Phillips, Muirkirk; Giles DePutter, Appin; Byrd Hooper, Pelee Island, and Henry Rahm, Blytheswood, Ontario.

Processors are Victory Mills, Canadian Vegetable Oils, and Toronto Elevators.



The Harvestore: will it revolutionize farm storage?

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Keep your eye on these ads. Point them out to your friends. And when you get a chance—give your good customer a helping hand!

*Consumption 1948 and Industrial Surveys, Inc., data

*National Association
of Margarine Manufacturers*

Munsey Building

Washington 4, D. C.

like a fruit jar to prevent spoilage?

Such a unit was put up on the market this season after 4 years of testing. It was designed by the A. O. Smith Corp. But farmers have kept half-cured hay and high moisture shelled corn in it for several months without spoilage.

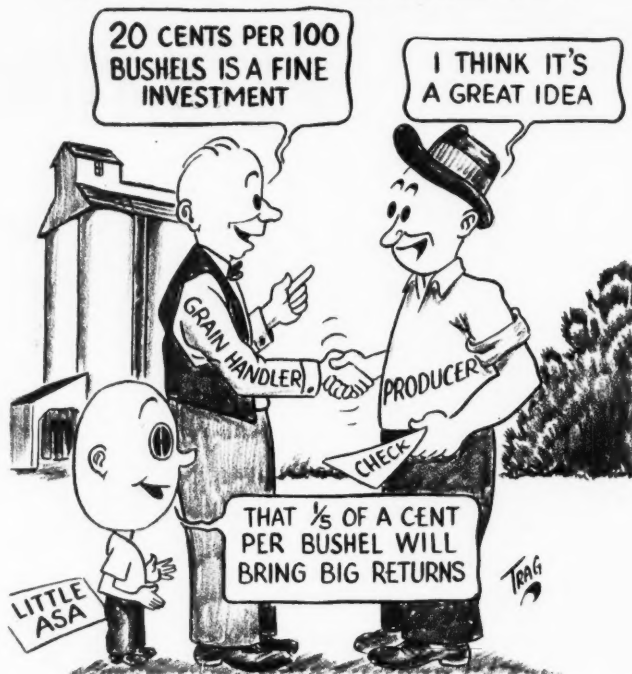
Agricultural engineers and biochemists are wagging their heads about the development. They wonder if it means the whole picture of farm storage is due for a radical change.

Unusual features of the new unit, which is called a Harvestore, are: The glass coating and plastic joint sealing which make it airtight; absence of ordinary silo doors; a plastic breather bag at the top which equalizes pressure within the structure; the bottom unloader. The structure is 14 feet in diameter and 40 feet high.

Of particular interest to the soybean grower is the adaptability of this structure for year-round operation. It can be filled and unloaded on a year-around basis. The freezing problem has been eliminated. Farmers using soybean silage will find it highly adaptable, for it can be partly filled with grass silage, then with soybean silage, then with corn silage, and so on to the top. The silage remains fresh in odor and flavor until used.

Soybean people taking a recent inspection trip for farm paper editors came away with the speculation that further use of this type of glass-lined construction may have advantages likewise for the storage of soybean oil.

BACK THE ASA PROGRAM NOW



USE MORE SOYBEAN MEAL

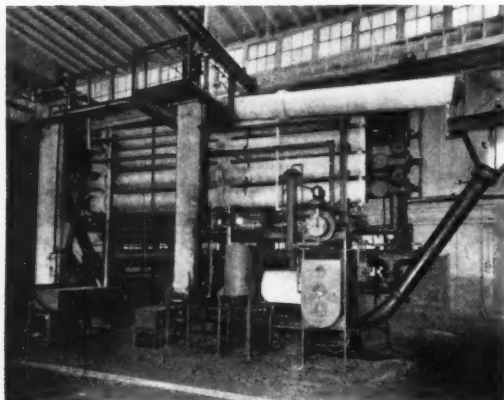
High prices of animal proteins may make it pay to feed more plant protein such as soybean oil meal.

E. L. Quaife, extension swine specialist at Iowa State College, says that hog producers are now con-

fronted with a situation, as far as tankage and meat scraps are concerned, very similar to that which prevailed during the war. When hog feeders have to pay around \$8 to \$10 a bag for protein feed, they begin to look for something else to take its place.

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● Here is a small (twenty-five ton), efficient extraction system especially developed for use in smaller operations. This plant, thoroughly tested and proved, uses non-flammable Trichlorethylene solvent and is manufactured under exclusive patent rights of Iowa State College. Operating data on this system, including figures on consumption and yield, will be provided on request.

You are invited to see this plant in actual operation now or during the fall convention



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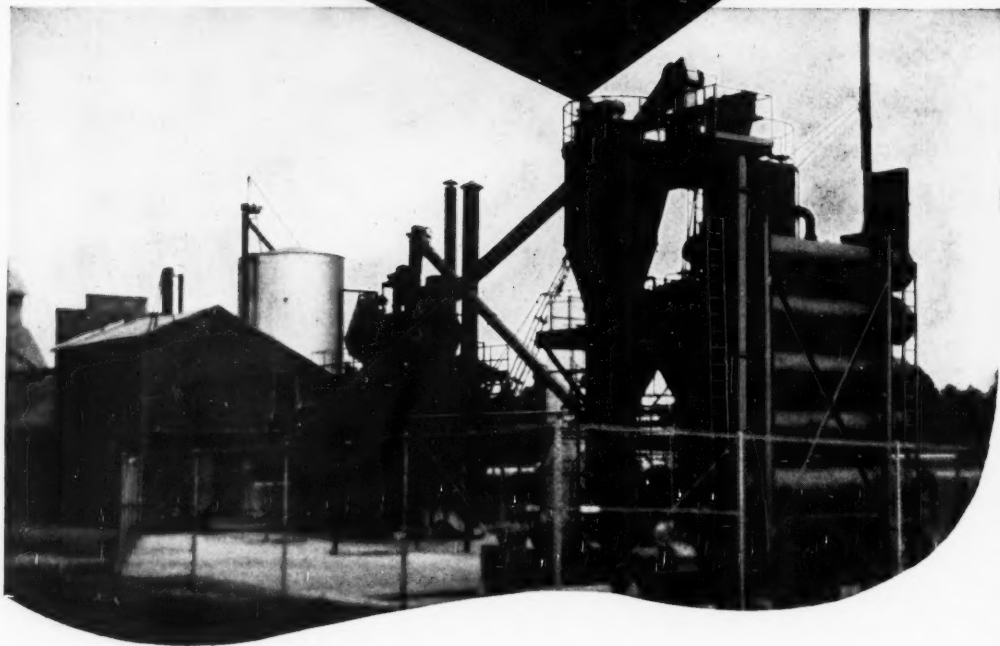
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Anderson Solvent Extraction Unit

● The list of Anderson Solvent Extraction installations continues to grow! This unit is now in operation in Lexington, Ohio, for the Lexington Soya Products Company. There are good reasons why many soybean processors are favoring the out-in-the-open, prefabricated type of solvent extraction unit. They like the fact that the Anderson system requires no costly multi-story or open-sided building . . . only a small building is needed for preparation and handling the processed material. Therefore, original investment on the plant is lower, and

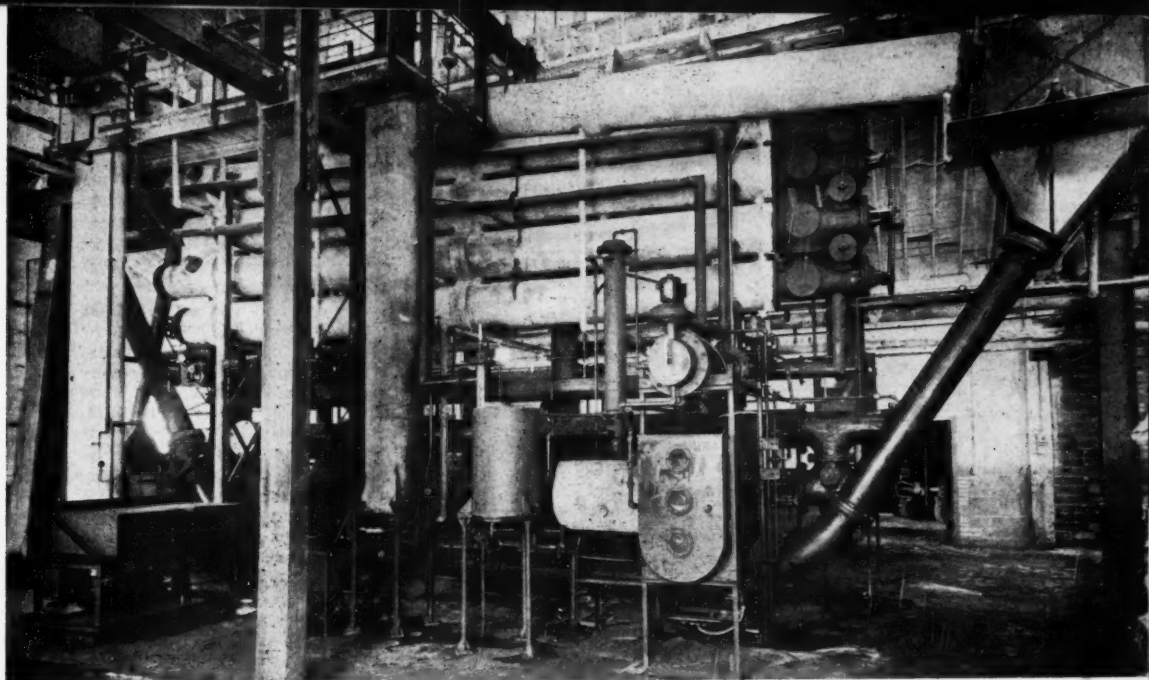
upkeep and insurance are usually correspondingly less. Processors approve of the safety features of this type of solvent extraction installation. Since solvent vapors are not confined in a building, the danger of explosion is eliminated . . . and fire hazards are reduced. The Anderson Engineer has detailed information on solvent installations. Write today, and we will have him give you the facts.

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New 25-ton solvent extraction plant for soybeans.

NEW EQUIPMENT FOR EXTRACTING SOYBEAN OIL WITH

TRICHLOROETHYLENE

By L. K. ARNOLD

Iowa Engineering Experiment Station,
Iowa State College, Ames, Iowa

A NEW SOLVENT extraction plant for soybean oil using a non-inflammable solvent is now available as a 25-ton per day unit. This plant, which uses trichloroethylene as a solvent, is the result of over 10 years of research and development by the chemical engineering section of the Iowa Engineering Experiment Station at Iowa State College.

The basic objective in this development was the production of a soybean oil processing plant adapted for operation in the smaller communities of the soybean belt either as an independent unit or in conjunction with local feed mills and elevators. The advantages of small plants located close to both the source of soybean supply and the market for the meal including such items as savings in freight on both

beans and meal have been discussed in a previous issue of the Digest¹ together with a description of the first laboratory pilot plant. This original pilot plant utilized screw conveyors to carry the flaked beans through the solvent contained in an inclined tube.

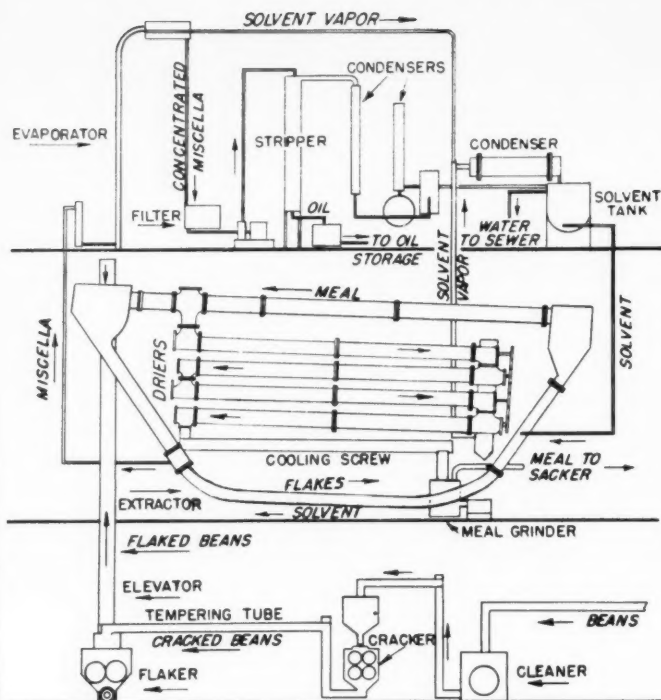
While it gave good results, subsequent experimental work with a new pilot plant has shown that superior results can be secured using a continuous chain conveyor instead of the screws. Improved solvent recovery apparatus was also developed. From the data derived from this new pilot plant a 10-ton per day plant was designed for J. Roach Sons, Plainfield, Iowa. This plant, shown in a previous issue of the Digest², has been in operation the past 3 years.

¹Arnold, L. K. A Call for Community Plants. Soybean Digest 1: No. 12: 4-5, 12. October 1941.

²Anon. Small Town Solvent Unit. Soybean Digest 7: No. 8: 14-15, June 1947.

The new commercial unit while embodying certain basic principles of the older plants previously described is of a newer and more compact design proved by both experimental development and commercial operation. A schematic flow sheet for the plant is shown on the next page. The operation of the plant as shown above is as follows:

The soybeans from storage pass through a cleaner to remove extraneous matter and over a magnet to remove any tramp iron not taken out in the cleaner. The beans are next weighed by an automatic dump scale and dropped into a bin from which they are fed by an electrically operated vibrating feeder to the cracker rolls below. The rate of feed of the beans into the extractor is controlled accurately at this point by adjustment of the control knob of the vibrating feeder. The two pair high cracking rolls cut each bean into five or six pieces. The cracked beans are next elevated in-



Flow sheet of new extraction process.

to the tempering tube—a steam jacketed tube in which they are heated to about 160° F, while being conveyed by a screw conveyor to the flaking rolls. The heating renders them plastic so they can be easily rolled into flakes 0.010 inch or less in thickness. The flakes are conveyed and elevated from the flaker to the feed end of the extractor into which they are dropped.

The extractor is essentially a loop of 12-inch pipe through which the flaked beans are conveyed slowly by means of a continuous chain conveyor driven through a sprocket at the feed end. The solvent enters the extractor at the opposite end and flows through it counter current to the flake movement emerging at a point below the flake entrance. The extracted flakes are carried up out of the solvent into the horizontal top run of the loop which is steam jacketed to preheat the extracted flakes (meal) before dropping into the driers.

The driers are steam jacketed 12-inch tubes through which the meal is conveyed and agitated by a modified screw conveyor. In the driers the solvent is completely vaporized and the solvent-free meal leaves the

lower drier through a special vapor seal containing a plug of meal which is continuously formed and broken up as the meal passes through the seal. The meal drops into a round bottomed trough where it is agitated and conveyed by a special screw conveyor while being moistened with water to replace part of the moisture evaporated with the solvent in the driers.

The meal is next ground in a hammer mill from where it goes to a bagging hopper.

The miscella (solvent-oil mixture) leaves the extractor through a slotted screen from which it flows to a climbing film evaporator. Here it rises as a series of slugs vertically through steam heated pipes to discharge into a flash chamber where much of the solvent is evaporated. The concentrated miscella from the flash chamber containing about 80 percent oil goes to a filter. An alternate arrangement is to filter the miscella before concentrating it. The final traces of solvent are removed in a combination falling film evaporator and stripping column packed with Berl saddles. The oil from the bottom of the column is pumped to storage.

Solvent and water vapors from the driers, evaporator, and stripper are condensed in water-cooled condensers and returned as liquids to the solvent tank. Here the solvent, because of its greater weight, goes to the bottom from which it is pumped back to the extractor. The water overflows at the top, going to the sewer.

The designers and manufacturers of this new unit point out that the new process offers many advantages. It is available in 25-ton moderately priced units ideal for small community plants to efficiently serve local feed needs. Multiple unit plants for larger size operation may be installed. It uses trichloroethylene, an excellent but non-inflammable and non-explosive solvent allowing it to be used in locations not possible for systems using the conventional flammable solvents. Insurance, whether for property, life, or liability is low. While trichloroethylene vapors, like most solvent vapors, have toxic properties they are not considered a health hazard unless present in amounts above 190 parts per million—a quantity far in excess of that occurring in the air about a plant in normal operation. Approximately 13,500 parts per million of solvent vapor in air are necessary to be serious for a one-half hour exposure.

Operation of the plant is automatic and simple. Solvent removal from both oil and meal is exceptionally good. The oil containing less than 50 parts per million of solvent is of prime color with a refining loss low enough to assure a premium price. The meal, which is high in protein, has been shown by feeding tests to be free from any toxic effects and to be a nutritious feed. It can be produced with a minimum of heat treatment for industrial use or toasted as desired for feed uses.

Several features contribute to the excellent operation of the unit. Preliminary drying of the beans is not necessary unless they contain too much moisture for storage before

● Now a small solvent plant is in production. It can be set up in small communities in the soy belt close to the source of supply of beans as well as close to the local market for meal. It can be operated by feed mills or elevators.

processing. Adequate moisture and proper heating prior to flaking facilitates the production of thin tough flakes. A special elevator brings the flakes to the top of the extractor with minimum breakage. The specially designed chain moves the flaked beans through the solvent without agitation thus reducing the amount of fines in the miscella to a minimum. Even the slotted miscella screen is designed to reduce breakage of flakes as well as to assure trouble-free removal of the miscella at this point. Special agitators have been designed to secure maximum drying action without excessive breakage in the driers.

The stream-lined counter-current flow of solvent through the extractor is subject to a minimum hindrance by the skeleton-like conveyor chain. The chain which becomes heated in the upper steam jacketed meal preheater heats the incoming flakes which not only assists in the extraction of the oil but keeps the viscosity of the miscella low to insure good flow out of the extractor. A barrel-valve formerly used has been replaced with the newly designed vapor seal in which the meal is formed into a vapor tight plug as it leaves the drier thus effectively preventing any solvent loss.

The equipment for this process is manufactured and sold by the Crown Iron Works Co. of Minneapolis, Minn., under a license from the Iowa State College Research Foundation, Inc., holders of the patent rights.

— s b d —

DELPHOS MEETING

About 130 elevator managers and owners attended an afternoon and evening meeting Sept. 19 sponsored by the Delphos Grain & Soya Products Co., Delphos, Ohio.

Harry Prue of the USDA Grain Inspection Office of Toledo, Ohio, assisted by Paul Rozelle, local representative, held a grain grading school at the elevator. Interest was centered around the determination of damage in corn, identification of "sick wheat", as well as the change in the new standards for grading soybeans.

A banquet was served to all guests and an excellent program was held at St. John's Little Theatre. The discussion centered around soybeans, their products and problems. Floyd E. Hiegel, president of the Delphos Grain & Soya Products Co., acted as master of ceremonies.

Esel Walley of the Walley Agri-

cultural Service, Ft. Wayne, Ind., and past president of the American Soybean Association, gave a presentation of the food values of soybeans in human consumption to prove his subject, "Soybeans are Worth More Money".

Siert F. Riepma, of the Margarine Manufacturers Association of Washington, D.C., outlined briefly the basic facts why there should be no tax or restrictions as to color on the sale of margarine.

The feature address was given by Ward Calland, managing director of the Soybean Crop Improvement Council, Chicago, Ill. Calland emphasized the value of soybeans in the crop rotation, their ability to improve tilth and increase the nitrogen supply.

Trend Is Adverse

More young farmers are leaving soybeans than are taking up their production, the replies to a questionnaire addressed by the Grocery Manufacturers of America to 2,500 young farmers (average age 31) to every state in the union would indicate.

Flour Mill Now Holds Soybeans



Once known as the Kite Mill, this 100-year-old flour mill at Oakland, Ill., has been acquired by Acord Grain Co. and converted into an elevator. C. R. Acord, Kansas, Ill., bought the mill during the 1944 harvest when he was short of storage space for beans. It was being used as a feed mill at the time. The tower was added later. Arch Babb is manager of the Oakland plant.

BOOKS

CORN GROWING IS REVISED

A new, fifth edition of *Corn and Corn Growing*, well-known book on hybrid corn and the Cornbelt by Henry A. Wallace and Earl N. Bressman, has just been published according to an announcement by John Wiley & Sons, New York publishers.

Emphasizing changing practices and the latest methods of growing corn, the new volume was completely revised by J. J. Newlin, vice president of the Pioneer Hy-Bred Corn Co. and one of the first corn growers to experiment with hybrid corn; Edgar Anderson, geneticist to the Missouri Botanical Garden and Engelmann professor of botany at Washington University; and Earl N. Bressman, former scientific advisor, U. S. Department of Agriculture.

CORN AND CORN GROWING, 5th edition. By Henry A. Wallace and Earl N. Bressman. Revised by J. J. Newlin, Edgar Anderson, and Earl N. Bressman. New York: John Wiley & Sons, Inc. 1949. 424 pages. \$4.50.

8 Steps in Grading Soybeans

UNDER REVISED STANDARDS EFFECTIVE SEPT. 1, 1949

(Reprinted from U. S. Department of Agriculture extension service folder by permission).

Farmers know they cannot get top prices for dirty wool, mixed eggs, or tree-run apples. The same is true of low-grade soybeans. This article shows you how to tell soybeans of high grade.

Sample

Start with a fair sample of the soybeans. (Grain graders use a long metal trier, or probe, to draw a sample.)

The first five tests are made before the sample is sieved.

1. Odor

Smell the sample. Soybeans with a musty, sour, or other bad odor will be graded as Sample. Soybeans can grade No. 1, No. 2, No. 3, No. 4, or as Sample. Sample grade is the lowest. The higher grades bring higher prices. No. 2 is the grade used most in the grain business.

2. Weevil and Garlic

If the soybeans are infested with live weevils or other live insects injurious to stored grain, the term "weevily" is added to the grade, as No. 2 Yellow Soybeans, Weevily.

If 1,000 grams (about 2¼ lb.) of the soybeans contain five or more garlic bulblets (wild onions), the term "garlicky" is added to the grade, as No. 2 Yellow Soybeans, Garlicky.

Weevils and garlic are seldom found in soybeans, except in a few counties.

3. Moisture

Soybeans must be dry to keep from spoiling in the bin. Grade No. 2 may have no more than 14 parts of water in 100 parts of soybeans (14 percent). Grain inspectors make tests for water content with moisture machines. Most farmers know by the hardness of the grain when soybeans are dry enough to store safely.

4. Test Weight

Good soybeans are plump and heavy. Grain inspectors use a brass quart measure and beam in making test weight. No. 2 soybeans must

GRADE CHART FOR SOYBEANS, EFFECTIVE SEPTEMBER 1, 1949

Grade	Minimum test weight per bushel Pounds	Maximum limits of			
		Moisture Percent	Splits Percent	Damaged kernel (Soybeans and other grains) Percent	Foreign material Percent
No. 1 ¹	56	13.0	10	2.0	2.0
No. 2 ²	54	14.0	20	3.0	3.0
No. 3 ¹	52	16.0	30	5.0	4.0
No. 4 ²	49	18.0	40	8.0	6.0

Sample grade—Sample grade shall be soybeans which do not meet the requirements for any of the grades from No. 1 to No. 4, inclusive; or which are musty, or sour, or heating; or which have any commercially objectionable foreign odor; or which contain stones; or which are otherwise of distinctly low quality.

¹ The soybeans in grade No. 1 of the class Yellow Soybeans may contain not more than 1.0 percent, in grade No. 2 not more than 2.0 percent, and in grade No. 3 not more than 5.0 percent of Green, Black, Brown, or bicolored soybeans, either singly or in any combination.

² Soybeans which are materially weathered shall not be graded higher than No. 4.

test at least 54 pounds to the bushel. Farmers with clean, dry, ripe soybeans never have trouble with test weight.

5. Foreign Material

Soybeans should be clean. Dirt and weed seeds lower the price and grade. Inspectors clean soybean samples with a screen or sieve. The sieve has round holes one-eighth of an inch across. Dirt, pieces of soybeans, and other matter taken out with this sieve are known as fine foreign material. Foreign material also includes corn and other grains, sticks, pods, weed stems, and large weed seeds, such as those of cockle-burs, morning-glory, horsenettles, or groundcherries, which will not go through the sieve. Inspectors pick

this coarse material off the sieve and add it to the material that went through the sieve. The combination of the fine material removed by the sieve and the coarse material that remained on the sieve makes up the foreign material.

To grade No. 2, soybeans cannot contain over 3 percent of foreign material. See grade chart above, column headed "Foreign material."

The next three tests are made on the sample after it has been run over the sieve. The sample may still contain coarse foreign material.

6. Mixed Colors

Soybeans of different colors, such as black or brown in yellow, lower the value. Keep black, brown, and green beans away from the yellow.

What Farmers Can Do to Grow Soybeans That Will Grade High

1. Use good seed.—Get a high oil-yielding variety recommended by your own state experiment station.

2. Make a good seedbed.—Work the ground well to kill weeds before planting the seed. Plant soon after corn, when the ground is warm, and preferably in rows, so that beans can be cultivated. Late-planted beans may not ripen and may lodge in the field. Inoculate the soil when soybeans are sown on land for the first time.

3. Harvest carefully.—Do not

combine until the seed is fully ripe. When soybeans are very dry, be careful not to split the seeds in combining or threshing. To prevent spoilage, soybeans should be thoroughly dry before they are put into the bin.

Licensed grain inspectors and federal grain-inspection supervisors of the United States Department of Agriculture are the officials located in the larger grain markets who can give you further advice on grading soybeans.

The eight steps in grading soybeans are illustrated at right.

Over 2 percent other colors in yellow throws the sample out of the No. 2 grade. See grade chart, footnote 1, on page 14.

7. Splits

When soybeans are very dry they may split when they go through the combine. The combine should be adjusted during the day as the beans become drier.

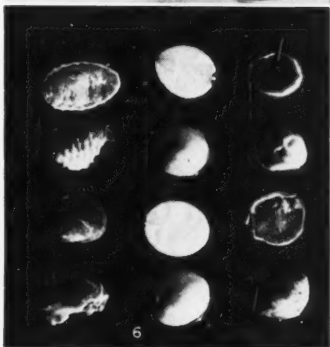
To be in No. 2 grade, beans may not be over 20 percent split. Fractions of 1 percent are disregarded in making this test.

8. Damage

Soybeans are used for food. Moldy, rotten, or frozen beans are not wanted, and the damaged beans cannot exceed 3 percent if the soybeans are to grade No. 2. Inspectors cut some of the beans in half with a sharp blade to be sure the damage has gone through the outside skin. When cut open, sound, ripe soybeans usually show a creamy-yellow color; any great difference in color indicates that the bean is damaged. If damp soybeans heat in the bin, the kernels may turn brown inside and look like overroasted peanuts. This is called heat damage, and mills do not want heat-damaged soybeans.

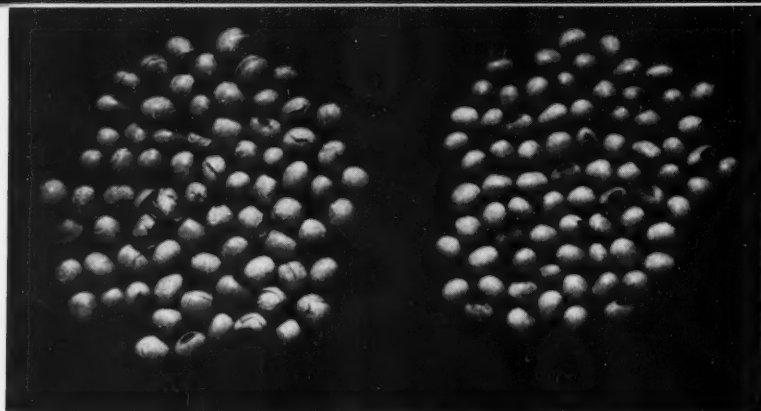
Grain inspectors use small scales or balances to make correct tests of what the sample has in it. After your soybean sample is tested by the inspector it is graded. If it does not pass for No. 1, it may be No. 2, No. 3, No. 4, or Sample grade.

The inspector must give his reason for assigning the grade he gives to the soybeans. If you are not satisfied with the grade, you may appeal to the district grain-inspection supervisor, United States Department of Agriculture.

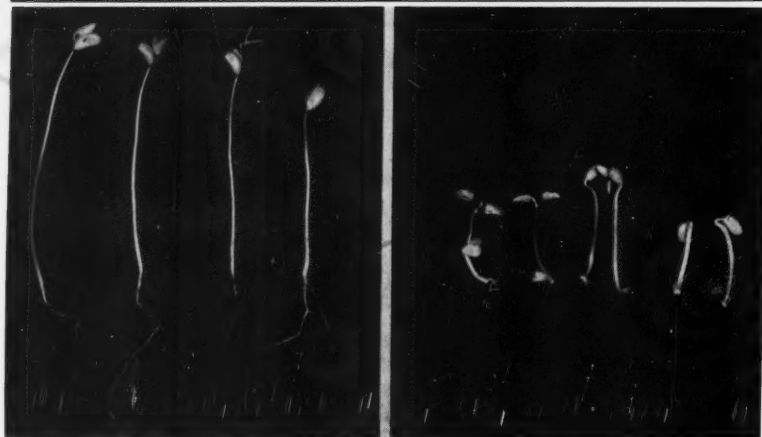


HIGH-GRADE SOYBEANS

Have a good natural odor.
Are dry and clean, plump and heavy.
Are not mixed with soybeans of another color.
Do not have many split or damaged beans.



At left top are soybean seeds injured in combining, at right sound seeds. Soybeans that have been damaged in harvesting may sprout and grow, yet produce only stunted or deformed plants. The seedlings at lower left are normal—note the long vigorous roots. Seedlings at the right are the same age yet have no central primary roots, and that's why their growth is so poor. Seedlings like these may grow but they won't produce much.



HARVEST LOSSES

In Soybeans

IF YOUR SOYBEANS don't grow and if your stand is poor, it may be that the seed beans were injured in harvesting or during handling operations.

Injured seeds may not germinate at all, or they may sprout and produce stunted or deformed plants. Mechanical damage in harvesting soybeans is often overlooked because the beans aren't actually lost. Yet the U. S. standard for No. 1 soybeans does not allow more than 10 percent cracked beans. Damage above that amount may mean a lower price for your beans if you see them for commercial use.

For use as seed it's more impor-

tant that the beans be sound. If you didn't get as good a stand as you expected in your soybeans this year, harvest injury may be the answer.

We compared the germination of injured and uninjured seeds in the laboratory here at Iowa State College. While most of the injured beans sprouted, only 56 percent of them produced healthy, normal seed sprouts. Only healthy seedlings are counted in the germination tests. The stunted sprouts are not counted since they would never develop into normal, mature plants.

Compared with the injured seeds, beans in which you could see no signs

**By E. L. BARGER and
CHARLES R. WEBER**

Iowa Agricultural Experiment Station

Reprinted from Iowa Farm Science. Photos from Iowa Farm Science.

of injury averaged 92 percent germination (See table.)

Last year harvest injury to soybeans ran high in many fields, mainly because they were so dry at harvest time. Shattering and other losses also were high in many cases. Bean injury frequently resulted from over-threshing to reduce some other, more obvious type of bean loss.

Actually it's total efficiency that is important. The experienced combine operator knows that he may have to accept some small losses in harvesting soybeans in order to keep the total, over-all harvesting loss as low as possible.

Direct Losses

There are five common losses in combining soybeans:

- (1) Shatter losses
- (2) Cutter bar losses
- (3) Cylinder losses — injured beans
- (4) Separating losses
- (5) Cleaning losses

Here's the kind of germination you get from injured seed and seed with no sign of injury. (Only strong, healthy sprouts are included in germination counts.)

	No visible sign of injury	Seeds with broken seed coats
	percent	percent
Normal sprouts	92	56
Abnormal sprouts	7	34
No sprouts	1	10

SOYBEAN DIGEST

Total losses (not including injury to seed) of less than 3 percent are not uncommon when conditions are just right. But all too frequently conditions aren't that good. Losses may be as high as 25 percent. Obviously you don't get the full benefit of a good yield unless all of the beans are harvested.

Injured Beans

Cylinder losses are of two types. First, there may be unthreshed pods in the straw. And second, there may be the cracking and bruising already described.

The first loss is usually very small, less than 1 percent. The damage from cracked seeds can usually be held below 5 percent, although this depends mostly on how dry the beans are when they are combined. It's up to the combine operator to keep these losses low.

Cracked or damaged beans are injured in the cylinder of the combine, where the beans are separated from their pods. The action in the cylinder is called "threshing effect," and is made up of three things—(1) the speed of the cylinder, (2) the clearance between cylinder and concave bars, and (3) the number of bars in the cylinder and concave.

The beans are injured when they are battered about against the metal parts of the machine in the threshing process. Exactly the same results can be produced by dropping dry beans on a hard surface from a height of several feet. Any sort of rough handling during harvest or in later handling may cause bean injury.

Adjust in the Field

If the threshing effect in the cylinder does not remove the beans from their pods, there is no other part of the machine that will do the job. Instruction manuals give the approximate cylinder speeds and settings to use for different crops. But there is no set rule—the operator has to watch conditions and performance in the field, then make corrections as needed.

We have to view the final adjustments as a sort of compromise.

If the machine is set so that practically 100 percent of the beans are removed from the pods, you should expect a small percentage of cracked beans. Where 10 to 20 percent of the beans are cracked, then the threshing effect is too strong. The operator has overdone one part of the job at the expense of another.

Check Straw

Check the straw as it comes out of the machine. If the beans are all removed from the pods, but cracked beans are coming over, then the threshing effect is probably too great.

Under some conditions the cylinder can be slowed down below the recommended speed, as long as all the beans are being threshed out. When the beans are hard to thresh out, you may have to compromise between a reasonable amount of cracked beans and a reasonable percentage of the crop saved.

Beans on the Ground

Shatter losses—beans on the ground—can't be recovered by the combine. Although this loss is generally less than 1 percent, it can run discouragingly high if the beans shatter easily. The best way to avoid this type of loss is to harvest at the right time—before the beans get too dry.

Cutter Bar Losses

Cutter bar losses are often serious. They may run as high as 20 percent; a 5 percent loss is not unusual.

If pods are set low on the stalk,

there just isn't much you can do to harvest them without running the cutter bar into the dirt. If the beans are ridged from cultivation, and if the lodged beans fall between the ridges, then the cutter bar passes right over them and there's nothing you can do about it.

Less ridging during cultivation, and planting varieties that stand up well would help reduce this loss. Frequent use of the rotary hoe, spiked-tooth harrow or weeder when the beans are small (up to 6 or 8 inches in height) followed by one cultivation with an ordinary cultivator will keep the land relatively weed-free and level and reduce cutter bar losses.

Separating Losses

Separating losses are the most easily seen; they show up as whole, threshed beans coming through the straw.

These may be rack losses or sieve losses. Losses at the rack occur when the threshed beans ride over with the straw and fall out of the rear of the combine. This happens when the rack is operated too slowly, or when the rack gets overloaded with straw or weeds.

(Continued on page 24)



—Photo courtesy North Iowa Cooperative Processing Association
Such combining scenes were common in early October. In fields of low-moisture content bean harvest losses may run high again this year.

SOYBEANS IN JAPAN

By T. KURAKAKE

Secretary, the Japanese Soybean Association, Tokyo, Japan

SOYBEANS ARE said to have had their origin in the Orient, and have been cultivated in Japan since the early days. They were included as one of the five ancient principal crops. These crops differed with different books but in addition to soybeans were ordinarily listed as German millet, barnyard millet, wheat and rice.

Though soybeans have been grown for centuries in Japan the tendency has been to neglect them due to a lack of ingenuity among farmers in improving varieties, to the fact that government laboratories did not take measures to improve them, and to the fact that growth was rather satisfactory even when they were allowed to grow naturally.

It is very difficult to find out the number of varieties in Japan, but the Japanese Soybean Association estimates the number at more than 1,000. The reason for this large number is assumed to be that they appeared naturally during the long span of time over which they were grown in the various localities.

Experiment Stations

In Japan, each prefecture has its own agricultural experiment station, and each experiment station selects varieties that are most suitable for the prefecture and encourages the farmers to grow them. There are about 170 of these recommended varieties. Of the above, about 10 are the result of cross breeding carried out at the experiment stations; about 50 to 60 are by selection and the remainder are produced naturally.

The characteristics of good varieties in Japan have been: resistance to disease, high yield and a good taste when roasted. However, recently soybeans have been looked on as a source of oil because of the shortage of fats and oils, and soybeans with high oil content are in great demand.

Japanese soybeans are classed as summer, autumn and intermediate types according to the planting and

maturing periods. Summer type varieties are planted in April and May. The flowers bloom with the high temperatures of the early summer, and the beans can be harvested in late July or early August. The period from planting to harvest is from 90 to 100 days.

It seems that the summer varieties are generally heat-sensitive and have relatively low photo-sensitivity. They are widely grown in the plains of western and eastern Japan and in Hokkaido. Most of the varieties grown in Japan are of this type. Usually they are small-seeded.

The autumn type soybean in contrast to the summer type is highly photo-sensitive and has almost no heat sensitivity. It is planted from the middle to the latter part of June. Flower bloom is accelerated as day length is shortened after mid-summer. The beans are harvested in November. The time from planting to harvest is more than 130 days. Varieties of this type are usually grown in the western part of Japan where it is relatively warm. But the acreage is comparatively small.

Varieties of the intermediate type are in between the summer and autumn types. Planting is from May to June. They have photo- and heat-sensitivity to about the same extent, and require from 100 to 130 days to mature. This type is grown widely in northern Japan with the exception of the mountainous districts of eastern Japan and Hokkaido, and the number of varieties is next to the summer type.

The total soybean acreage and production in Japan has been declining since about 1910, which was the peak. The acreage during the latter part of the 1890's was more than 400,000 chobu with a production of over 300,000 tons. Acreage and production gradually increased to about 460,000 chobu and 500,000 tons. However, with this as the peak, acreage and production have gradually decreased so that since the Pacific War acreage has been 220,000 chobu and production 200,000 tons. With the decrease in

acreage and production there was also a decrease in yield per area planted.

During the same period, from the 1890's to just before the Pacific War, the yield of rice, wheat and barley increased from 130 to 200 percent, but that of soybeans fell from 20 to 30 percent from the peak period. The reduction in yield shows to what extent the farmers neglected improvement of varieties, while the government was inactive and without progressive policies.

Were Unprofitable

Another reason for the decline is that soybeans were an unprofitable crop for farmers. Japan began to import large quantities of cheap Manchurian and Korean soybeans during the 1890's. As a result the farmers in Japan were compelled to sell their soybeans at a cheap price.

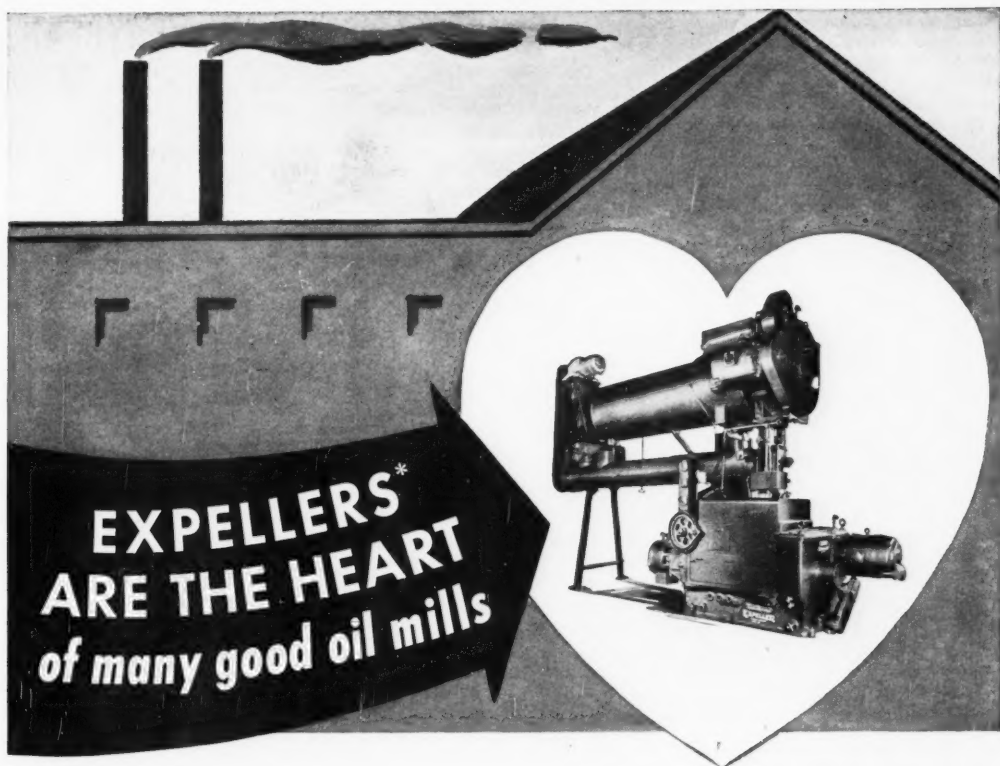
At about the same time the capitalistic economy began to develop in Japan with the gradual evolution of exchange economics. Japanese farmers quit planting unprofitable crops and changed over to more profitable ones. Soybeans were replaced with mulberries for silk raising, orchards, vegetables and sweet potatoes.

Soybeans were always sold at about 60 percent of the price of rice and at about the same price as fertilizer. Actually much of the soybean crop in Japan was formerly used as fertilizer.

However, in spite of the fact that soybeans were an unprofitable crop, they did not disappear entirely from the farms in Japan. Farmers continued to plant them not as a commercial crop but for their own consumption. Only the excess above their own needs was sold on the market.

The districts where soybeans are grown most widely are areas where agrarian economics is most back-





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ward—in the mountainous areas of Tohoku, Hokuriku or Kanto and in the Kyushu area. In the advanced agricultural areas they are limited to the banks of rice paddies, roadsides or plots around the houses. In other words, the existence of soybeans indicates feudalism in Japan. Under such conditions there is no opportunity to improve varieties to fit specific farms. Here lies the answer to the question of why the soybean declined in importance year after year but still continued to exist.

The rise and fall of soybeans in Japan has a very close relation with the importation of foreign soybeans which has increased six-fold since 1897.

The principal exporters of soybeans to Japan were Manchuria and Korea. Quantities imported by Japan gradually increased from about 200,000 tons during the 1910's to 800,000 tons following 1928. As a result of this large quantity of cheap soybeans, domestic soybeans were almost neglected.

However, defeat in war caused a great change in the soybean picture in Japan. Japan lost Manchuria and Korea and the importation of soybeans from these territories was completely cut off. As a result, Japan faced a grave fats and oils and protein shortage.

Total imports of soybeans since the war have been less than 10 percent what they were before the war.

Formerly, the greater part of the soybean meal obtained after the extraction of the oil was used as fertilizer or livestock feeds; but soybean oil meal and soy flour imported from the United States are now used for making miso and shoyu. This indicates the critical shortage of soybeans.

CROP CAMPAIGN AGAIN ASKS SOYBEANS

Soybeans, because of their high nutritional value and the variety of their uses, are among major farm products sought this year in the Christian Rural Overseas program (CROP), the cooperative church overseas relief project.

Drives now are being conducted in the nation's 33 top agricultural states for bulk gifts in kind to fill CROP's Friendship Food Trains for the aged, ill, orphans, and destitute all over the world. The program is sponsored by Catholic Rural Life, Church World Service (22 Protestant denominations), and Lutheran World Relief.

Among the states in which there is emphasis on the solicitation of soybeans are Illinois, Indiana, Iowa, Kentucky, Minnesota, Missouri, Ohio, South Dakota, Tennessee, and Virginia. CROP concentrates on the donation of bulk commodities, although cash is accepted.

Last year, more than 6½ million pounds of soybeans were given in the CROP campaign. They were sent to relieve acute suffering in Austria, China, Germany, India, Japan, Korea, Pakistan, and Philippines.

The soybeans and other products such as wheat, milk, and corn are shipped overseas in bulk and distributed by church agencies to the neediest, regardless of race or creed.

CROP officials are well aware of the effectiveness of soybeans as life-giving food for the unfortunate abroad. CROP's national office in Chicago and the program's parent agencies constantly receive reports on the value of—and the desperate need for more—soybeans. It is for that reason that the largest possible amount of soybeans is sought in the

harvest season drive this year.

John D. Metzler, national CROP chairman, points out, "that American soybeans contributed through CROP have more uses other than for immediate feeding.

"We have an authoritative report from China that the civil war there has caused the destruction of seed stock in a particular area of that country. CROP had shipped a carload of soybeans there for food use. The farmers used this for replanting rather than for immediate eating, so the gift of American farmers was greatly multiplied in the agricultural economy of China."

Of particular interest to American soybean growers in relation to the CROP program are the first-hand experiences of Ersel Walley, past president of the American Soybean Association, who in 1948 spent 3 months observing conditions in Europe.

In a letter to Metzler, Walley wrote that he is "very much interested in the CROP program. Soybeans fit in particularly well with the needs there, inasmuch as they are a source of badly needed edible proteins and fats.

"You could take this as the unqualified endorsement of the American Soybean Association to your program, and also my personal endorsement based upon first-hand experience. In my opinion, the CROP organization is doing a wonderful job in Europe and I know of no other means whereby, with so little hardship on the American people, so much is being accomplished."

Farm-to-farm solicitation for CROP now is underway across the country.

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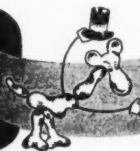
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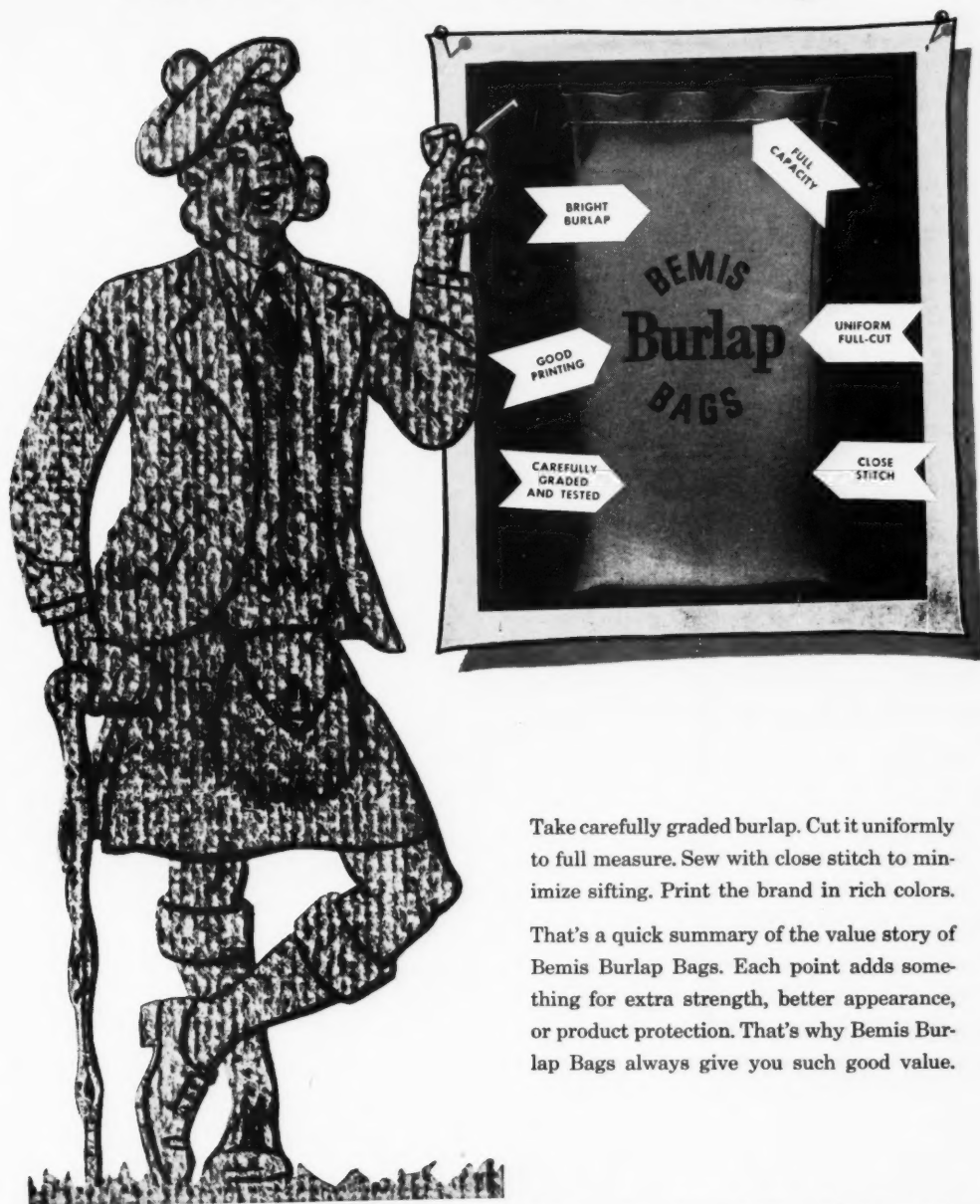
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KILL HR 2023 FOR THIS SESSION

After months of delay, the Senate Democratic policy committee sidestepped for this year all action on HR 2023, the bill to repeal the 63-year-old margarine laws, by voting unanimously Sept. 13 to carry the bill over to the next session.

The committee pledged itself to make HR 2023 the first order of business in the new session of this Congress when it opens in January.

A margarine repeal bill passed the House in 1948 as well as this year, and also died in the Senate.

Commented the New York Times on the delay: "It is a painful spectacle to see the Senate leadership duck this one again. We think they should reverse themselves and stay in session some night until they can take a vote, for the housewife's sake."

Margarine won a victory the first week in September when the Senate, following action of the House, voted to permit the U. S. Army to buy margarine. This throws out an 13-year-old prohibition against the Army buying margarine except for cooking. The Navy still prohibits the serving of margarine.

The Ohio state ban on yellow margarine goes to a vote of the people Nov. 8. This marks the first time the voters have had a chance to pass on the question at the polls.

"Both sides are clearly aware that the stakes are high and that the chips are down," states the Association for Yellow Margarine. "The butter interests are seeking to convince city voters that they should deny themselves the right to buy pre-colored margarine. Confident of the city vote, consumer forces allied with margarine are carrying their story to rural voters."

"The margarine backers are counting heavily on Ohio's 52,000 soybean-growing farm families who have a direct and immediate interest in margarine, their second largest market outlet."

PROFITEERING?

The British Ministry of Food is making a fat profit out of its purchases of U. S. soybeans that may eventually run to 500,000 pounds, according to the London Daily Telegraph.

The Ministry of Food has bought about 25,000 tons of soybeans this year at from 28 to 34 pounds a ton, and resold them to soy flour manufacturers at 59 pounds a ton. The soy flour eventually reaches the public at the controlled price of 93 pounds a ton, about twice what it would cost on a free market, according to the Daily Telegraph.

"Before the war Britain imported about 100,000 tons of soybeans a year," states the British newspaper. "The limited allocations now made by the Ministry go entirely for human consumption. The flour is used for a variety of foods and is an important ingredient in confectionery, cakes and ice cream."

— s b d —

WHITE BREAD MONOPOLY

White bread bakers may get a monopoly on the use of the unqualified word "bread" under a proposed change in Federal food standards. Dr. Leonard A. Maynard, director of Cornell University's School of Nutrition, warned recently at a Food & Drug Administration hearing.

"Specifically the addition of 5 pounds of soy flour for each 100 pounds of wheat flour in bread would help meet a demonstrated need for additional protein in the diet of certain groups," he explained, "but a production containing such a protein supplement could not be called bread under the proposed definition."

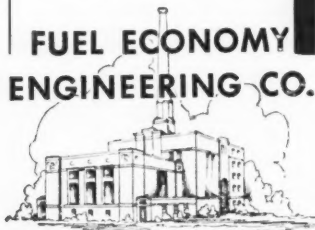
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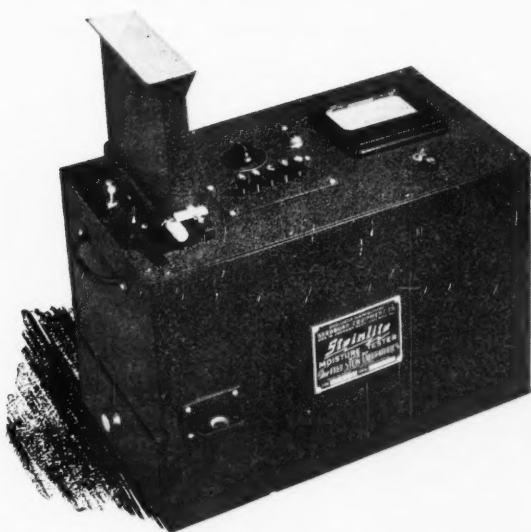
These are some of the bins that make it possible for Missouri Soybean Co., Caruthersville, Mo., to handle a lot of beans and help meet the needs of the Delta region for storage. This summer 10-14,000-bushel steel tanks were erected at Hayti, in addition to the existing 60,000-bushel capacity of the firm. Butler Manufacturing Co. furnished the tanks.

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OCTOBER, 1949

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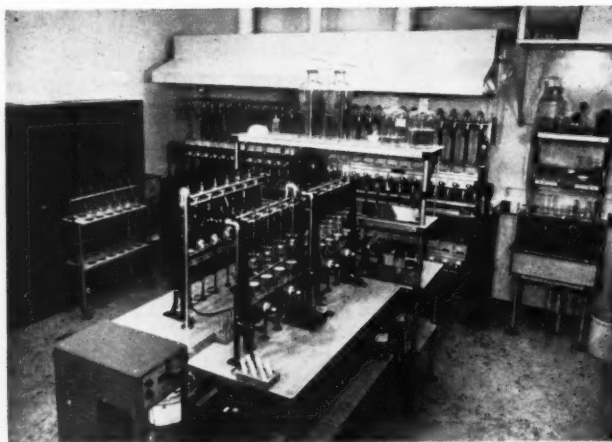
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BARGER

(Continued from page 17)

Sieve losses result from a combination of sieve adjustment and wind blast. Overthreshing at the cylinder may cause this also. When the straw is threshed too hard, it breaks up into smaller pieces creating extra chaff. This overloads the chaffer and the cleaning sieve.

What is a proper setting? If the sieve openings are not large enough, beans will ride over the sieve and go back through the cylinder again. (This increases the chance of cylinder damage.)

If sieves are opened too much, dirt and other material will fall through with the beans, and the job of cleaning becomes difficult. As a practical rule, set the machine so just a few of the threshed beans will pass over the sieve and return with the tailings back into the cylinder.

Don't be too concerned by a few beans lost behind the machine. It is total efficiency that you are after.

Getting the right wind blast for cleaning also is largely a trial and error adjustment. Too much wind will blow the grain over. Not enough will leave dirt in the grain. Here again it's a compromise adjustment.

When to Combine

The best way to harvest soybeans is to combine direct from the standing stalks. The pods should be fully matured and the beans hard. Beans can be combined at 14 percent moisture or higher, but they are not safe to store until the moisture is 13.5 percent or below. Most elevators have equipment for making the moisture test.

For a rough test in the field the pods should be dry enough to split open when squeezed between thumb and forefinger. Dry beans will crack all the way through when you bite them. If the beans are "cheesy" you can be pretty sure the moisture is too high.

Usually soybeans are in their best condition for combining after the first good frost. This completely kills the green stalks and the weeds. If these aren't dead and dry they may cause the sieves to clog up in combining—even though the beans themselves are dry.

Often the season when conditions are right for harvesting beans is rather short. So plan ahead for the equipment and storage you will need. When the beans are ready, go ahead with your harvesting as rapidly as possible. Delay may be costly.

SOYBEAN DIGEST

HARVEST IN FULL SWING

Harvest was well under way in widely scattered parts of the soy belt in late September. With continued favorable harvest weather, the crop was about out of fields in spots in central Illinois. Iowa was not so far along, but combining was proceeding very rapidly in that state also.

Drought hurt some in western sections, but good early yields are being reported. Some very high yields were coming from fields in central Illinois.

Most beans are grading well with low moisture content. Damage from disease, pests and other causes has been less than usual this year. Storage is a big problem with a shortage of bins in Iowa, Illinois and Missouri. There seemed real danger of a market glut in this area.

Producers in the central part of the soy belt were storing all beans they could find space for rather than sell below support prices. Up to 50 percent in some Illinois localities and 60 percent in Indiana were reported as remaining in producers' hands.

Indications Sept. 1 point to a crop of 204.2 million bushels, according to USDA crop reporting board. This is up 1 percent from last month, but 7 percent below the record crop of 220.2 million bushels produced in 1943. Production this year is the second highest of record despite the smallest acreage planted for beans since 1941. The indicated yield of 21.1 bushels per acre is

exceeded only by the 21.4 bushels per acre in 1943. The 10-year average is 18.7 bushels per acre.

A record yield of 25 bushels per acre is expected in Illinois. The outlook in that state has never been better. Excellent podding and filling are general over the state. Continued dry weather during August reduced yields sharply in parts of Minnesota and Iowa.

Total output of oilseeds from 1949 crops will be well above the 1938-47 average though not as large as last year. Cottonseed production is estimated at 21,000 tons more than 1948, flaxseed substantially less than 1948, and peanuts 24 percent less than 1948, according to the Aug. 1 report.

Reports of Soybean Digest correspondents follow:

ARKANSAS

L. M. Humphrey, R. L. Dortch Seed Farms, Scott, for Little Rock area (Sept. 22): Maturity about week late caused by cool wet weather first half of September. A few S-100s combined. Yield above normal and a little above earlier estimates. About 90% will be marketed direct from field. Storage situation satisfactory. Short cotton crop will reduce amount of cottonseed.

ILLINOIS

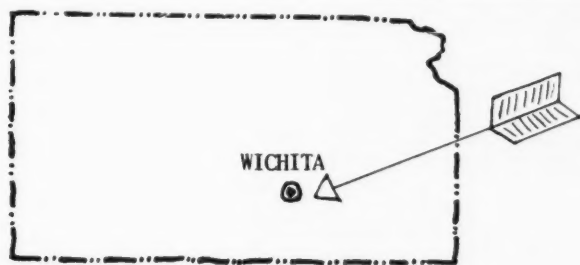
Robert W. Weitzer, Valley Farms Co., Carrollton, for west central (Sept. 28): Maturity earlier than normal by 10 days. Two-thirds com-

bined on Valley Farms. We were able to combine earlier and with better results in the weeder fields because we used defoliation. Several different pentachloro phenol compounds were used. We were able to dry out weeds that at this time of year are normally very green. Yield 5 to 8 bu. higher than last year. Beans very low in moisture and fine quality. If weather stays fair all beans will be combined within 2 weeks on Valley Farms. Storage situation tight. Most farmers selling direct from field.

Walter W. McLaughlin, Decatur, for locality (Sept. 22): Crop more mature than normal. Should be 50% harvested by Sept. 28. Beans grading No. 2 or better. 50% will be marketed direct from field. Quite a few farmers have bought storage. Others are hiring storage from elevators.

E. E. Eversole, Hindsboro, for Douglas, Coles and Edgar Counties (Sept. 24): Crop 15% earlier than normal. 40% harvested. Yield 10% above normal. Soybeans test 13% to 11% moisture, unusually good. 75% will be marketed direct from field. 15% will go under government support. Storage situation fair.

J. C. Hackleman, extension agronomist, Urbana, for central and southwestern (Sept. 23): Maturity perhaps 3-4 days early. Sept. 25-Oct. 1 will see many fields combined. Have heard numerous reports of 35 to 40-bushel yields and moisture content on the lots was below 12%. Yields will approach, or possibly even exceed, last year. 95% of crop will be marketed direct from



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field. Storage situation improved, still not adequate.

Russell S. Davis, Clayton, for west central (Sept. 24): Bulk of crop earlier than normal. 10% harvested. Harvest so far indicates yield per acre will be near highest for this soil type. Three-fourths of crop ready to combine. Some drilled solid beans that lodged badly quite green yet. Some fields of Hawkeye maturing 2 weeks earlier than Lincoln.

Paul C. Hughes, field service director American Soybean Association, for Bloomington and vicinity (Sept. 24): Maturity some earlier

than normal, but this is spotted. 5% harvested now, but if weather holds 50% will be harvested by Oct. 1. Reported yields almost too good to be true, range as high as 45 bu. per acre. Beans grading No. 2 or better. 60% or better will be marketed direct from field. If price goes much lower at least 20% of crop will go under loan. Storage too short in this area as elevators filling up with government corn.

J. E. Johnson, Champaign, for Champaign and adjoining counties (Sept. 26): Maturity 2 weeks earlier on the average than normal. 65% harvested by Oct. 1. Could even run higher with fair weather. Yields reported to date would show a 30-bu. average. Principal reason is there seems to be practically no disease damage as compared to 1948 and previous years. Beans large, carry a very fine lustre, grading excellent. 50% or more will be marketed direct from field. Tendency seems to be to sell at or around support price. Storage facilities not quite as good as 1948, however, sufficient to accommodate requirements.

INDIANA

Ersel Walley, Walley Agricultural Service, Inc., Fort Wayne 2, Ind., for northeast Indiana and northwest Ohio (Sept. 26): Average maturity of crop normal. 3% to 5% harvested. Yield about as expected. Soybeans grading No. 2. Too much damp weather for harvesting. Likely some weather damage and loss. 40% will be marketed direct from field. 60% will remain in farmers' control. Market experience of past year, especially July price rise, may make many farmers favorable to storing and holding 1949 beans.

Agricultural Alumni Seed Improvement Association, Inc. (Sept. 26): Soybeans in Lafayette area show more mottling than normal. We understand condition is normal throughout state.

K. E. Beeson, Indiana Corn Growers Association, Lafayette (Sept. 24): Maturity about 1 week earlier than normal. 5-10% harvested. Early yields indicate excellent crop. We are still optimistic of exceeding official state estimate. Some "frog-eye" disease on several varieties grown in southern Indiana has reduced quality. More recently distributed variety for southern Indiana showing excellent quality and disease resistance. Some frost reported on muck. Most soybeans should

be out of frost danger now. Very little change in storage situation.

J. B. Edmondson, Danville, for south central (Sept. 26): Maturity 2 weeks ahead of normal, Hawkeyes 10 days ahead of Lincolns. Combining started about Sept. 15. 75% of Hawkeyes are combined or ready. Few Lincolns combined. Hawkeye yield around 30 bu. average. Soybeans grading generally No. 2. Green weeds, bull nettle berries, etc., common in beans. Moisture 12 to 14%. No frost damage. Some worry about green, virus-infected plants spotted through fields. 60% up will be marketed direct from fields unless market breaks. Growers fairly satisfied with \$2.06 to \$2.11. If market strengthens very few will go under government program, otherwise 10 to 15%. Storage situation not too good. Few new bins being built. Farmers' worry directed more to cribs for corn.

IOWA

O. N. LaFollette, State Department of Agriculture, Des Moines (Sept. 22): As of this date too little harvested to estimate. Yield above normal. Should grade well. A high percentage will be marketed direct from field due to farm storage problem, if market conditions permit.

Howard L. Roach, Plainfield, for northeast (Sept. 26): Yield uneven. Will be about normal. Harvesting prospects good. Some drought damage. 30% will be marketed direct from field. 20% will go under government support. Storage situation tight.

M. G. Weiss, farm crops subsection, Iowa State College, Ames (Sept. 26): Maturity 5-9 days ahead of normal. 30-40% will be harvested by Oct. 1. Yield 5% below 1948, slightly below earlier estimates. Soybeans grading No. 1 and 2. Drought brought largest decrease in yield compared to 1948. Some disease prevalent in spots, mainly southeast and east. 60% to 70% will be marketed direct. 15 to 20% will go under government support. Storage situation very poor.

Leslie M. Carl, state agricultural statistician, Des Moines (Sept. 26): Maturity of crop about normal. Soybeans are small. Harvesting prospects favorable.

KANSAS

H. L. Collins, agricultural statistician, Topeka (Sept. 23): Maturity 105% of normal. Crop was planted early and although cool weather early in September held back the crop maturity is more ad-

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vanced than usual. Harvest just starting in southern counties. Yield up slightly. 80-85% will be marketed direct from field. Storage situation satisfactory.

E. A. Cleavinger, extension specialist, Kansas State College, Manhattan, for eastern (Sept. 26): Maturity of crop normal. Harvest has just started. Yield estimated 110% of normal. 60% will be marketed direct from field. Storage situation all right.

KENTUCKY

U. S. Department of Commerce Weather & Crop Bulletin (Sept. 20): Soybeans mostly matured. Considerable cutting for hay.

H. F. Bryant, agricultural statistician, Louisville (Sept. 23): Maturity very variable. Some normal or earlier, some a bit late. Recent weather quite favorable for maturing and early harvesting. Yield about in line with earlier estimates, a bit above normal. Soybeans grading "good." Moisture quite variable, 13 to 16%. Quality good. 4 in. rain in 1 day 2 weeks ago in Owensboro area did minor damage.

LOUISIANA

W. M. Scott, Tallulah, for northeast (Sept. 24): Maturity 10 days late. Yield 80% of normal. Harvesting should start about Oct. 10 to 15. Approximately 50% of crop will be marketed direct from field. 50% will go under government support program. Storage for 50 to 60% of crop will meet government requirements.

MINNESOTA

R. E. Hodgson, Waseca, for southeast (Sept. 24): Maturity 10 days early or more. 20% of crop harvested. Our yields are above normal. Beans 11 to 12% moisture. Weather is perfect. Beans in perfect shape. Yield may have been cut some by drought. Everything the traffic will take will be marketed direct from field. Guess is 80 to 90%. Some elevators already clogged.

John W. Evans, Montevideo, for southwest (Sept. 27): Maturity advanced as compared with normal. 10% of crop harvested. Yield slightly down. Beans grading No. 1. No frost yet but soybeans running about 14% moisture. Considerable will go under government support if storage can be found. Public storage filled with flax and corn.

MISSOURI

Heartsill Banks, O. H. Acom Farms, Inc., Wardell, for southeast

(Sept. 24): Maturity later than normal. Maybe 2% harvested. Five inches rain in early September slowed up maturity. 90% will be marketed direct from field. Maybe 10% will go under government support. Very little storage.

John E. Brown, Cypress Land Farms Co., Jaywye, for New Madrid County (Sept. 23): Maturity normal. 2% of crop harvested. Yield same as last year. Soybeans very dry. 75% will be marketed direct from field. Percentage to go under government support depends on

price, but up to 25%. Storage situation much improved over 1948. A great deal of new farm storage.

Harry A. Plattner, Malta Bend (Sept. 24): Maturity 75% of normal. Very small percentage of crop harvested. Yield same as early estimates. 90% will be marketed direct from field if possible.

J. Ross Fleetwood, extension specialist in field crops (Sept. 23): Maturity normal but some fields in some localities late. Only a very few will be harvested before Oct. 1. Highest yield on record expected.

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- WASHINGTON, IOWA

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Probably better than 70% will be marketed direct from field.

Eduard Tillman, Missouri Soybean Co., Caruthersville, Mo., for Pemiscot County (Sept. 24): Maturity about same as normal. Few soybeans harvested yet. Very good crop. 90% will be marketed direct from field. 10% will go under government support. Storage situation not too good. Some on-the-farm storage built. We have a new addition to our Hayti elevator that enables us to store 200,000 bushels.

NEBRASKA

Donald G. Hanway, assistant agronomist, University of Nebraska, for eastern (Sept. 26): Maturity normal or slightly early. 5% of crop harvested. Yield above average. Quality will be very good. Lodging has been much less than normal.

NEW JERSEY

John E. Baylor, assistant extension specialist farm crops, New Brunswick (Sept. 24): Maturity about normal. Many will begin harvest within 10 days. Yield normal or slightly below. Drought in mid-summer caused some yield loss but not quality. About 75% will be

marketed direct from field. Storage no problem as acreage too small.

NORTH DAKOTA

C. J. Heltemes, agricultural statistician, Fargo, for eastern (Sept. 26): Maturity a little earlier than usual. Harvest just starting. Weather excellent so far. Yield cut by drought.

OHIO

G. G. McIlroy, Irwin, for west central (Sept. 23): Maturity 2 weeks ahead of normal. 1% of crop harvested. Yield 10% better than 1943. Soybeans grading good, 12 to 19% moisture. 90% will be marketed direct from field. Only 20% will go under government support due to large percent having been contracted within last 60 days. Storage situation good with respect to soybeans but not so good as far as corn is concerned.

D. G. Wing, Mechanicsburg, for west central (Sept. 23): All beans are past frost danger and some early beans combined. Small percentage harvested due to continued rain and green weeds. Yield better than 1943 by 10 to 15%. Steady rain all summer has made for good prospects except for bad weeds in spots.

Some beans will be held in storage not eligible for loans. Corn storage is in bad circumstances and there seems to be no bean storage.

ONTARIO

R. H. Peck, River Canard, for southwestern (Sept. 26): Maturity 1 week earlier than average. About 10% harvested. Yield about 10% above average. If present weather continues through harvest period grade should be very good. Some yields may be a little under average due to pod and stem blight damage, especially in some fields of Hawkeyes. 75% will be marketed direct from field. Processors can store all of Ontario's crop.

VIRGINIA

Henry M. Taylor, Department of Agriculture, Richmond, Va. (Sept. 27): Maturity about 10 days later than normal. No soybeans harvested. Yield above average, 16.5 bu. indicated. Harvest will be about Oct. 15. About 15 to 20% will be marketed direct from field.

WEST VIRGINIA

R. J. Friant and Collins Veatch, Morgantown (Sept. 23): Maturity normal. 90% hay beans harvested. Practically none harvested for seed. Yield normal. Storage ample.

WISCONSIN

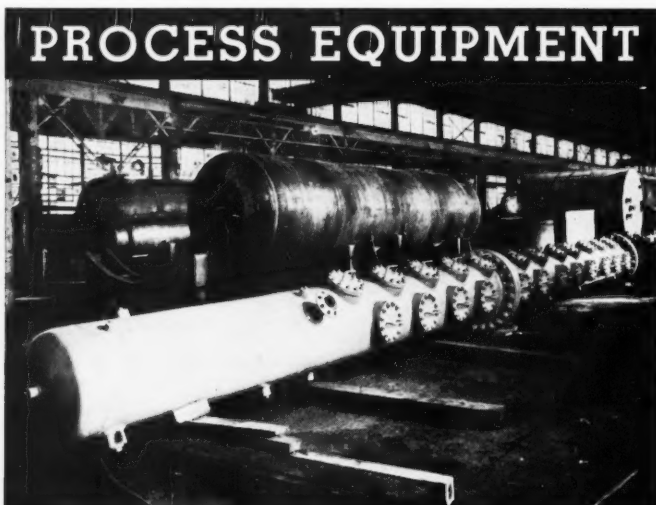
Geo. M. Briggs, College of Agriculture, Madison (Sept. 23): Maturity better than normal. Using better varieties and season favorable. 10% of crop harvested. Soybeans are grading No. 1. All will be marketed direct from field. Storage situation okay.

John P. Dries, Saukville, for eastern (Sept. 26): Crop maturity 100%. 5% harvested. Yield normal. 90% will be marketed direct from field. 10% will go under government support.

SOYBEANS FOR BEANS*

State	Production		Production	
	Yield per acre	Average	1948	1949
		1935-47		
	Bushels	Thousand bushels		
Ohio	20.5	21.0	16,276	18,614
Ind.	21.5	21.5	20,686	31,196
Ill.	24.0	25.0	59,831	78,504
Mich.	17.5	18.5	1,464	1,138
Wis.	13.0	17.0	479	195
Minn.	18.5	16.5	4,452	15,614
Iowa	23.0	20.5	25,894	35,443
Mo.	20.0	21.0	6,334	15,900
Kans.	15.0	13.5	1,471	2,505
Va.	16.5	16.5	994	1,749
N. C.	13.5	14.0	2,505	3,564
Ky.	19.0	19.0	892	2,299
Tenn.	20.0	19.0	525	1,340
Miss.	18.0	15.0	998	2,394
Ark.	19.5	18.0	2,544	5,148
Other States	15.4	13.5	2,836	4,598
U. S.	21.4	21.1	148,381	220,201

* USDA crop reporting board Sept. 9.



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EVANS GREW FIRST SOYBEANS IN 1917

John W. Evans of East Home Farm, Montevideo, Minn. (on front cover), comes to the presidency of the American Soybean Association as an old time soybean and qualified by a lifetime of organization activity in many fields.

Evans began growing soybeans in 1917. He went into production on a large scale after the end of the drought period in the late 30's. He grows annually about 100 acres on his farms—in 1949, Ottawa Mandarin, Capitol and Hawkeye varieties.

Soybeans are only one of the crops in Evans' well rounded system of farming. He raises 100 acres of crossing plots for Minihybrid seed corn and another 100 acres, usually of a certified grain crop. For many years he ran a dairy. He now operates an approved seed cleaning plant.

Evans went on the board of directors of the American Soybean Association in 1946 as the first member from Minnesota. He was elected vice president in 1948.

He has been a member of the board of directors of the Minnesota Crop Improvement Association since 1924. He served as president from 1926 to 1934, and is chairman of that Association's legislative committee. He served as secretary of the Minihybrid Growers Association.



JOHN W. EVANS

a statewide hybrid corn setup, for 9 years. A special honor was selection in the first class of Minnesota Premier Seed Growers, in 1928.

Your new president has taken on more than his share of responsibilities in his state and home community. For 23 years he has been president of the Farmers Equity Elevator Co. at Montevideo, which has 1,200 stockholders. He has been active in Minnesota Republican politics and was a farm spokesman for the Minnesota delegation at two national Republican conventions, 1936 and 1940.

Evans is 59 years of age and a graduate of Hamline University at St. Paul. Mrs. Evans often attends ASA conventions with him. They have three children, one of them still in college.

Evans' entrance into soybean production has paralleled that of his state. The astonishing rise in soybean production over the last decade has placed Minnesota among the leading soy states.

EMULSION PROCESS

Oils and fatty materials may be emulsified in glycerol to produce a stable, non-aqueous emulsion through utilization of a process discovered by Finn W. Bernhart, of Holt, Mich., and assigned to Wyeth, reports Drug Trade News.

By adding to the composition a small amount of alcohol-soluble protein (prolamines) or a mixture of them or a material containing one or more of these proteins in substantial proportions, the stabilized emulsion may be easily effected, according to the claims of the inventor in U. S. Patent 2463738.



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Publications

Venezuela

Some observers believe soybeans have possibilities for large-scale production in Venezuela, according to the report of the FAO oilseed mission for Venezuela.

The mission was organized at the request of the Venezuelan government and was made up of Dr. K. S. Markley, Southern Regional Research Laboratory; Dr. Dale W. Jenkins, U. S. Army Chemical Center; and Carl E. Claassen, research agronomist of the chemistry project of the University of Nebraska.

The information obtained on cultivating soybeans in Venezuela was meager, though production tests on a number of varieties have been conducted by the government.

Dr. A. Bonazzi, who was employed at the El Valle Experiment Station when the experiments were in progress and Dr. Steinmetz, who is farming near Maracay, reported good yields.

Some U. S. Cornbelt varieties such as Lincoln flowered and matured very early in 1947 tests, due apparently to the short length of day in the tropics. But Biloxi and Seminole were apparently normal in behavior and yielded well.

The mission recommended that efforts be made to obtain the best

variety possible for Venezuela conditions. It suggested that a research program on cultural practices could be started immediately with the Biloxi or Seminole varieties.

According to the report soybeans appear to be of special interest to Venezuela for several reasons:

1—Field beans are a common field crop and it would not be difficult to educate farmers to grow soybeans.

2—As a legume the soybean may be of value to soils low in nitrogen.

3—Production can be entirely mechanized with equipment already existing in Venezuela.

REPORT OF THE FAO OILSEED MISSION FOR VENEZUELA. Food and Agricultural Organization of the United Nations, Washington, D. C. Price \$1.

Protein Value

Soy milk is biologically 80 percent as efficient as whole milk powder, and the whole soybean and curd is 75 percent as efficient. This has been determined by workers at the State College of Washington.

When soy protein was supplemented with sesame seed the value was raised to 94 percent.

Purpose of the paper was to com-

pare the biological value of the protein of soy milk and curd with that of the whole bean and with whole milk powder; and to determine the vitamin, mineral and amino acid content of these products.

Soy milk was found to be a better source of vitamins than the whole bean.

BIOLOGICAL VALUE OF THE PROTEIN AND THE MINERAL, VITAMIN, AND AMINO ACID CONTENT OF SOY MILK AND CURD. By Irene C. L. Chang and Hazel C. Murray, Cereal Chemistry, July 1949, Lincoln, Nebr.

Soy Protein

It is well known that the properties and nitrogen content of isolated soy protein vary with the method of preparation. A study has been completed at Northern Regional Research Laboratory, Peoria, Ill., to determine the phosphorus content of soy protein prepared by various known methods and to find a method of isolating phosphorus-free protein suitable for fundamental studies.

Phosphorus-free protein suitable for fundamental studies was prepared either by removing the phytin from the oil-free meal before extracting the protein or by dialyzing the soy protein extract against 1 N sodium chloride.

STUDIES ON THE PREPARATION OF SOY BEAN PROTEIN FREE FROM PHOSPHORUS. By L. L. McKinney, W. F. Sollars and E. A. Setzkorn, Journal of Biological Chemistry, Mar. 1949.

Feeding Corncobs

Tests of corn-and-cob-meal fed cattle and pigs have been under way at Madison County (Ohio) Experiment Farm for a number of years. They show a surprisingly high return for corncobs.

A new series of tests is yet to be reported on with different amounts of soybean oil meal with ground shelled corn and corn and added cob meal as the basis.

CORNCOBS MAKE GOOD BEEF. by Paul Gerlaugh, Wise Burroughs and L. E. Kunkle, Ohio Farm and Home Research, May-June 1949, Ohio Agricultural Experiment Station, Wooster, Ohio.

Antibiotic

A highly potent fungicidal antibiotic, antimycin A, has been isolat-



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ed by scientists at the College of Agriculture, Madison, Wis. The substance was obtained from a species of the mold *Streptomyces*.

The *Streptomyces* species was grown on medium containing soybean oil.

FUNGICIDAL ANTIBIOTIC OF HIGH POTENCY ISOLATED BY U. OF WISCONSIN SCIENTISTS. Drug Trade News, Aug. 8, 1949, New York City.

In England

There is little promise for soybean growing in England in the near future, according to Prof. G. E. Blackman in *Farming* (British).

Like most countries where soybeans are new, England lacks suitable varieties. Tests have been carried on since 1942 on about 60 varieties, and a number will mature in England. But they are all dwarf types with clusters so close to the ground that they cannot be harvested mechanically.

Yield of these varieties about equal yields in the U. S., according to Professor Blackman.

THE FUTURE OF OIL SEED CROPS. By Prof. G. E. Blackman, M.A. *Farming*, July 1948.

Miscellaneous

STUDIES ON THE HEAT INACTIVATION OF METHIONINE IN SOY BEAN OIL MEAL. By Robert John Evans and Helen A. Butts, *Journal of Biological Chemistry*, April 1949.

CHEMISTRY IN THE EVOLUTION OF THE MODERN VARNISH INDUSTRY. By Dr. C. P. A. Kappelemer, *Paint, Oil and Chemical Review*, July 7, 1949. Chemistry has contributed to sweeping changes in the paint and varnish industry that have come about in the last 20 years.

THE EFFECT OF CRUDE SOYBEAN LECITHIN ON THE ABSORPTION AND UTILIZATION OF VITAMIN A FED PREPARATION TO THE EWE AND SOW. by H. D. Eaton, J. A. Christian, F. C. Daugherty, A. A. Spielman and L. D. Matterson, *University of Connecticut. Journal of Animal Science* May 1949.

PROTEIN SUPPLEMENTS IN SWINE FATTENING RATIONS. By A. A. Heidebrecht, O. B. Ross and R. W. MacVicar. Feeding and Breeding Tests. Miscellaneous Publication No. MP-15, Oklahoma Agricultural Experiment Station, Stillwater, Okla.

EXTRACTION OF SOYBEAN PROTEIN WITH SULFUROUS ACID. By L. L. McKinney and W. F. Sollars, Northern Regional Research Laboratory, Peoria, Ill. Industrial and Engineering Chemistry, May 1949.

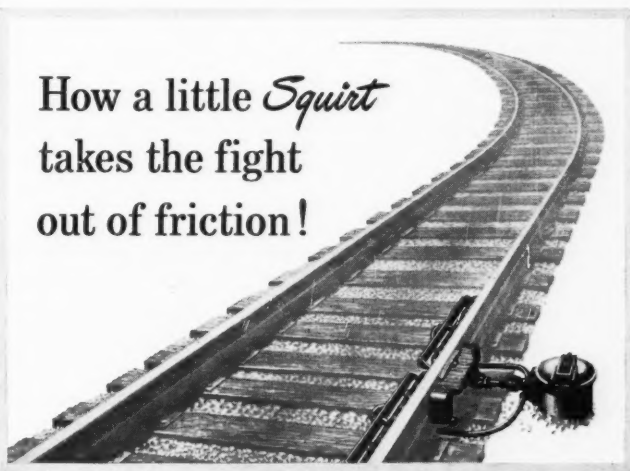
WE MADE 175 TONS OF SOY-SORGHUM SILAGE IN 4 DAYS LAST FALL. AND WE LIKE IT VERY MUCH. By Margery Jones, Pennsylvania Holstein, May 1949.

HAWKEYE SOYBEANS FOR INDIANA. By A. H. Probst and G. H. Cutler. Circular 343, Purdue University Agricultural Experiment Station, Lafayette, Ind.

UTILIZATION OF SOYBEANS. By Amparo del Rosario, Bureau of Plant Industry, *Agricultural - Commercial - Industrial Life*, Philippines.

A description of the general usage of soybeans.

How a little *Squirt*
takes the fight
out of friction!



Pulling a railroad train around a curve takes extra locomotive power due to the friction of the wheels against the rails.

But a more serious effect of this friction was the way wheel flanges *ground off* the rail head, making it necessary to replace rail on sharp curves every few years.

So railroad research engineers developed an ingenious "flange-lubricator" which is installed on curves. As the train approaches the curve, the car wheels come in contact with a tripper bar which automatically squirts a measured amount of lubricant against the flanges. Friction is reduced to a minimum...the locomotive load is lessened...and the outside rails on curves wear two or three times longer.

Finding new ways to make *every* detail of railroad operation more efficient calls for continuous research on hundreds of projects. It's typical of how American rail-

roads are constantly on the alert to cut the cost and to improve the service of the nation's most economical transportation system.

To keep improving America's railroad transportation network means constant investment, both in developing new and better ways of railroad operation and in the actual installation of research-proved innovations. And because the railroads have always given the "green light" to continuing improvement, the American people increasingly benefit from the thriftiest mass transportation in the world.



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GRITS and FLAKES...

FROM THE WORLD OF SOY

Construction of a new soybean oil extraction plant was begun at Decatur, Ill., about the middle of September by A. E. Staley Manufacturing Co., as part of a program for modernizing its processing facilities. The building is to be completed next July.

An attendance of 600 or more is expected at the fall meeting of the American Oil Chemists' Society at the Edgewater Beach Hotel, Chicago, on October 31, November 1, 2. A total of 63 papers will be presented. Program arrangements are in charge of H. T. Spanuth, Wilson & Co., Chicago.

Pillsbury Mills, Inc., will add space for 500,000 bushels of grain to its elevator at Lima, Ohio, Clyde H. Hendrix, president of Pillsbury's feed and soy division, announced recently.

Farmers Cooperative Association, Ralston, Iowa, has completed a new 550,000-bushel elevator.

Dr. Hans Podeyn, German director of food, agriculture and forestry, visited the Seedburo Equipment Co. plant recently with USDA officials. Dr. Podeyn has been making studies of U. S. methods to put American "know-how" into effect in the British-American zone during the next planting season to help feed Europe's hungry.

Active work on the breeding of soybeans to meet Arkansas conditions got under way Sept. 1 at the University of Arkansas when Dr. Paul E. Smith joined the staff of the agronomy department. He received his Ph. D. from Pennsylvania State College.

Swift & Co. Oil Mill, Blytheville, Ark., has completed building three new soybean storage tanks increasing its storage capacity 25 percent. D. A. Blodgett, superintendent, was in charge of construction.

The Big 4 Cooperative Processing Association, Sheldon, Iowa, is building a new two-story meal warehouse.

The West Tennessee Soya Mill, Tiptonville, Tenn., is erecting two additional concrete storage tanks, with about 5000-ton capacity each. They now have 10 storage tanks. The firm is also installing a Fairbanks-Morse track scale.

ELEVATOR LABOR-SAVER



This new labor-saving, low-cost Burrows "Bag Booster" is especially designed for warehouses where it is necessary to stack feed, grain and other materials high. It occupies only 9 square feet of floor space, rolls on casters and can be easily moved from room to room, or from warehouse to warehouse. Further details may be had from the Burrows Equipment Co., 1316-D Sherman Ave., Evanston, Ill.

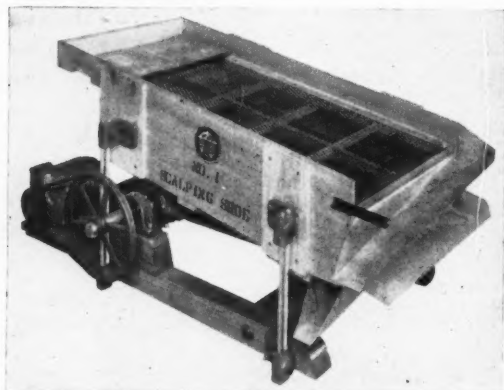
— s b d —

BOOK ON CONVEYORS



This new engineering data book No. ID-481 illustrating data and giving dimensions and list prices, may be obtained by writing industrial division, Dept. AW, Continental Gin Co., Birmingham 2, Ala.

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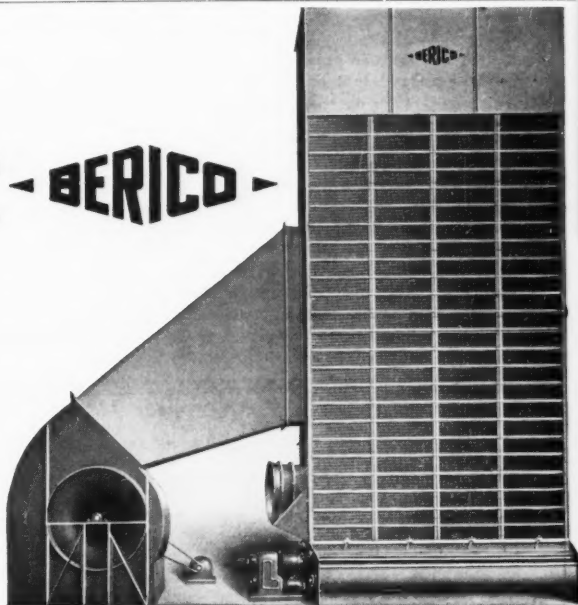
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OCTOBER, 1949



H. M. SHANZER CO.
COMPLETE MILL SERVICE
85 BLUXOME ST., SAN FRANCISCO 7, CALIFORNIA

The Delta Products Co., Wilson, Ark., has completed new air-conditioned offices of the oil mill, refinery, margarine plant and shortening plant. S. A. Regenold is general manager. Hunt Moore is manager of the oil mill. and John Preston, manager of the margarine plant, refinery and shortening plant.

* * * *

A new chemical laboratory has been completed at the Delta Products Co., Wilson, Ark., and is equipped with the latest type equipment for analyzing the products of the various plants. Mrs. Ernestine Pollak is chief chemist and will have several assistants. She was formerly with the Wilson & Co. Refinery, Oklahoma City, Okla.

* * * *

R. E. (Bob) Wilson, has been named manager of the Wilson Soya Corp., Wilson, Ark. He is the grandson of R. E. Lee Wilson, founder of the Lee Wilson & Co.

* * * *

Norris Grain Co., Toledo, Ohio, has started construction of a 500,000-bushel addition which will consist of 10 steel tanks, each 40 feet in diameter and 50 feet high. The new storage should be completed in time for the soybean harvest, and will give the company a 1,500,000-bushel total storage capacity.

* * * *

Dr. Malcolm M. Renfrew has been appointed head of the chemical department of General Mills research laboratories, Minneapolis. Dr. Renfrew was formerly supervisor of product development for the plastics department of E. I. du Pont de Nemours and Co. at Arlington, N. J.

* * * *

Cecil F. Marsh has been named vice president and general manager of Goodrich Brothers Co. feed division serving at Winchester, Lafayette and Seymour, Ind. Marsh was formerly vice president and general manager of Dannen Mills, Inc., St. Joseph, Mo., and is well known in the feed trade.

* * * *

Arid-Aire Manufacturing Co., Minneapolis, has announced the appointment of two new distributors to serve their respective states—Lima Armature Works, Lima, Ohio, and McLaughlin, Ward & Co., Jackson, Mich.

* * * *

Eight hundred soybean growers, grain dealers, livestock feeders and families of employees and shareholders of Swift & Co. soybean mill in Champaign, Ill., attended an open house recently, celebrating the completion of the mill's expansion program.

* * * *

Jacob Hartz Seed Co. has done some remodeling at the plant at Stuttgart, Ark., completely painted all the buildings, installed two new 298-D Clipper Cleaners, new belt elevator manlift, air-conditioning, new germinator and equipment in the laboratory.

* * * *

Maw-Knox Construction Co., chemical plants division, has begun construction of a soybean processing plant for Cargill, Inc. This plant located adjacent to the grain company's large storage elevators in Chicago, will give Cargill one of the largest soybean solvent extraction processing plants in this country. Completion is expected in 1950.

ADVANCED BY B & O



L. S. HARTLEY

L. S. Hartley, agricultural agent of the Baltimore and Ohio Railroad for West Virginia, western Maryland and western Pennsylvania, has been appointed manager of agricultural development of the entire B & O system, effective August 1. He succeeds the late O. K. Quivey.

Hartley, on his graduation in 1925 from the College of Agriculture of West Virginia University, became assistant county agricultural agent in Ohio County, W. Va., and in March, 1926, became agricultural agent for the B & O. He joined the West Virginia Agricultural Extension Service in 1932, and was county agricultural agent in Marshall County until November, 1935, when he again became agricultural agent for the B & O.

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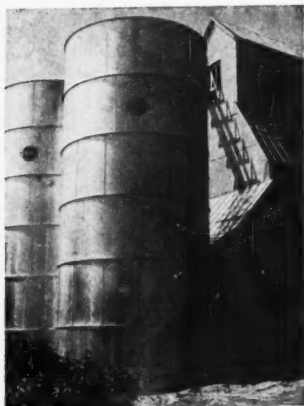
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BROKERS TO THE SOYBEAN PROCESSOR

STORE BEANS OR OIL



Bolted steel storage tanks of Black, Sivalis and Bryson, Inc., 720 Delaware, Kansas City 6, Mo., have a capacity range from 2,900 bushels to 45,900 bushels. They are used to store soybeans and, being oil tight, provide excellent storage for vegetable oils. These durable tanks may be erected in 2 days or less, say the manufacturers.

— s b d —

NEW SEEDBURO CATALOG



A new 144-page catalog recently released by Seedburo Equipment Co., 729 Converse Bldg., Chicago 6, Ill. It is of special interest to elevator grain men because of the new soybean grades incorporated therein, along with the newest in grain testing, grading and handling equipment and other items.

Rich's Whip Topping is now being packed in a new, disposable, pressurized metal container which spouts whipped dessert and salad topping at the touch of a finger. Whip Topping is a vegetable product, manufactured from soy oil and protein, manufactured by Rich Products Corp., Buffalo, N. Y.

New bulletin on the Day "Autoclean" Dust Filter may be obtained by requesting Bulletin 491 from the Day Co., 810 Third Ave., N. E., Minneapolis 13, Minn.

* * * *

The soybean extraction unit of the Continental Grain Co., Columbus, Ohio, burned recently with a loss estimated at \$200,000. Hexane gasoline fumes are believed to have been lighted by a soybean toaster, starting the fire.

* * * *

West Bend Elevator, West Bend, Iowa, has completed its new 250,000-bushel elevator.

* * * *

The Ph. H. Postel Milling Co.'s elevator that was damaged by fire a year ago, soon will be ready for full use. The damage is being repaired and the north end of the structure remodeled.

* * * *

The Burrows Equipment Co., 1316D Sherman Ave., Evanston Ill., is offering free of charge the revised edition of the government grain grading primer published by the USDA.

* * * *

R. A. Smith, auditor and office manager of Swift and Co. Oil Mill, Frankfort, Ind., since 1946, has been transferred to the Champaign soybean mill.

* * * *

Marshall Mills, Marshalltown, Iowa, is adding another Expeller to its plant to bring total to three.

* * * *

Williams Milling Co., Sac City, Iowa, held its second annual Watermelon Day Sept. 17. The firm held open house at its soybean processing plant, elevator and new grain storage bins.

* * * *

Cargill, Inc., Minneapolis, announces the appointment of Richard T. Claycomb to the position of editor of the Cargill Crop Bulletin.

* * * *

More than 1 million bushels of grain were handled through the Edgar County Grain Co. last year, Carl Kaiser, area representative of the Illinois Grain Marketing Association, reported recently. The company, which completed its first year, operates elevators at Chrisman, Scotland, Scotts, Woodyard and Harris Spur, Ill.

* * * *

Ward-Steed Co., Chicago, has recently announced the opening of a fourth branch office at 406 Merchants Exchange Bldg., St. Louis 2, Mo. S. J. "Jack" Cornell has been appointed manager.

* * * *

Experiments on soybeans, corn and fertilizer were observed by visitors at corn-soybean field days held Sept. 27, at the Carrington-Clyde Experimental Farm near Independence, Iowa, and Sept. 28 at the Howard County Experimental Farm near Riceville, Iowa.

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DEALERS IN MILL-MACHINERY AND ELECTRICAL SUPPLIES

"Serving Industry since 1895"

Bauer Brothers Co., 1723 Sheridan Ave., Springfield, Ohio, announces a new permanent magnetic separator. Full details will be furnished by the manufacturer on request.

* * * *

Williams Milling Co., Sac City, Iowa, has added two 40,000-gallon steel tanks to its capacity.

* * * *

Over 800 people attended the field day of Pike Hybrid Corn Co. at Pontiac, Ill., recently to see new hybrid corn varieties as well as oat and soybean plots.

* * * *

Appointment of Earl F. Riter as administrative assistant to Ralph G. Golseth, vice president in charge of the Glidden Co.'s soya products division in Chicago, was announced recently. Riter is an expert in the materials handling field.

* * * *

Farmers Co-op Elevator Co., Laurens, Iowa, has mailed blanks to soybean growers in its area to reserve space for storing their grain because of space shortage.

* * * *

Link-Belt Co., Minneapolis plant, announces the opening of a district sales office in Duluth, Minn., with headquarters at 422 Board of Trade Bldg., Duluth 2.

* * * *

Mt. Level Farms has recently built a 70,000-bushel elevator at East Prairie, Mo. Butler Manufacturing Co. supplied the tanks.

* * * *

Boone Valley Co-op Processing Association, Eagle Grove, Iowa, recently held an open house celebrating the opening of its new soybean processing mill and feed-mixing plant. The fireproof structure was built by Weitz & Co., Des Moines, Iowa.

* * * *

Miller W. Conn has been appointed assistant manager of the chemical products department of Phillips Petroleum Co., Bartlesville, Okla.

* * * *

The agricultural development traffic department of the Baltimore & Ohio Railroad, Baltimore, Md., has issued a map of soybean production in their territory with a list of the names and addresses of elevators. Bushelage information was obtained from federal-state crop reporting service.

* * * *

The following transfers in the oil mill department of Swift & Co., have been announced by S. E. Cramer, head of the oil mill department: Lamar Snowden transferred from Chicago to Little Rock, Ark.; H. B. (Hank) Parker from sales manager at Frankfort, Ind., soybean mill to Chicago; William W. Moore from the office of the president to sales manager at Frankfort.

* * * *

Sidney Grain Co., Sidney, Ill., has completed a 26,000-bushel storage tank to be used for either soybeans or corn. The concrete slave tank was supplied by Marietta Concrete Corp., Marietta, Ohio.

WITH FIRM 20 YEARS



CLYDE C. McINNESS

Clyde C. McInnes is celebrating the 20th anniversary of his association with American Mineral Spirits Co., Chicago. "Mac" McInnes, manager of Amsco's extraction solvent division, joined American Mineral Spirit Co. September 1, 1929. He came originally from Indiana.

"Mac" began his business career in the traffic department and thence into sales. Formerly he was manager of the Midwest and Southwest territory. In January of this year he was appointed manager of the extraction solvents division, responsible for this division in the company's national market coverage. During the past two decades he has contributed greatly to Amsco's more than a quarter of a century of experience in the petroleum solvents field.

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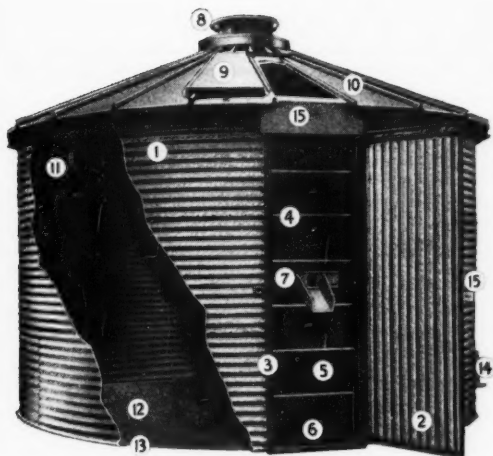
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LICK THE STORAGE BUGABOO!

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As everyone knows the problem of storing grain is far more acute this year than ever before.

But don't let it floor you, not for a minute... for it is a problem that you can decisively lick with Eaton All-Steel Galvanized Grain Bins.

What's **more**, you can render a real service, a service that will be genuinely appreciated by making Eaton Bins available to your trade.

EATON ALL-STEEL GALVANIZED GRAIN BINS

are designed to fully meet today's storage emergency. They safeguard your grain. Protect your profits. Study the

15 OUTSTANDING FEATURES

- Weather-tight.
- Rat proof.
- Fire proof.
- Theft Proof
- Engineered for easy filling and removal of grain.
- Can be set up by two men in day's time.
- Easily moved.
- Stationed in field or nearby location Eaton bins eliminate the necessity of hauling grain to distant bins or elevators during busy harvest time.
- Practically no upkeep cost.
- Comply with all Government regulations for adequate storage and meet all loan requirements.

1. Sturdy all-steel construction. Will not rot or warp.
2. Big weather-proof door, 26" wide by 8' high, permits storage of tools, machinery and other items when bin is not being used for grain storage. Note: on 2750 and 3300 bushel bins door is 24" wide by 28" high.
3. Heavy 10 gauge steel channel door frame.
4. Heavy $\frac{1}{2}$ " threaded tie rods form support for door frame and removable door panels. Strong, sturdy construction provides protection against spread of door frame under the heaviest possible grain load.
5. Removable door panels prevent grain spillage when outer door is opened.
6. Tunnel type shoveling board built in door opening makes removal of grain easy and prevents waste.
7. Door panel equipped with sack-inspout.
8. Combination ventilator and elevator-fill opening with walkway. Ventilator cap is adjustable.
9. Removable roof section for shovel filling.
10. Narrow, pressed steel, interlocking roof sheets give added strength to withstand snow loads and strong winds. Eaton construction assures a weather-tight roof.
11. Heavy anchor strap on each section of roof provides added protection against strong winds.
12. Double lock seamed floor, rolled for shipment, fits onto flanged side wall.
13. Floor section recessed into sidewalls assures a grain-tight, weather-tight joint between floor and side wall when 20 and 24 gauge sidewalls are used.
14. Heavy angle iron anchor straps are provided for anchor wires. Anchor also acts as a protective ground against lightning.
15. Lock straps on door and removable roof section make bin theft-proof.

SPECIFICATIONS AND PRICES

Capacity	Dimensions	Bottom	Corrugated Side Walls	Door Size	Roof	Approx. Wt.	Price
1000 Bu.	14-ft., 3-in. wide x 8 ft. high	24 gauge	24 gauge	26 in. wide x 8 ft. high	26 gauge	1540 lbs.	\$290.00
1350 Bu.	14 ft., 3-in. wide x 10 ft. 9 in. high	24 gauge	24 gauge	26 in. wide x 8 ft. high	26 gauge	1820 lbs.	\$349.00
2200 Bu.	18 ft. wide x 11 ft. high	24 gauge	20 gauge	26 in. wide x 8 ft. high	24 gauge	2505 lbs.	\$578.00

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WASHINGTON



Digest

1950 CONTROL One of the policy questions to be decided this winter is whether to put acreage allotments on soybeans for the 1950 crop.

The question has not been decided so far. It won't be until acreage allotments are announced for cotton and for corn; and until estimates are made as to how much acreage might be shifted from these crops to soybeans next year if there are no allotments.

The decision on flax would seem to indicate there would be no allotments on soybeans next year. Flax price support was cut from 90 to 60 percent of parity for 1950.

This will mean a support price of approximately \$2.65 a bushel next year, compared with the \$3.99 guarantee, Minneapolis basis, for the 1949 crop.

At the same time, it's been decided not to put allotments on flax next year—to try for a sharp reduction in acreage by lowering the price only.

In the case of flax, with this year's crop there is about a 2 year's supply, with a year's requirements held by Commodity Credit Corporation.

CCC has something over 180 million dollars tied up in flax price support, and unless prices rise sensationally in the next few years it stands to lose something like half the total.

The soybean situation is greatly different. There is no market surplus of beans. World demand for beans is strong, and prices are still holding up well.

However, cotton acreage will be

cut around 4 million acres next year as far as national allotments are concerned. A very sharp cut will also be asked in corn acreage—at least 10 million acres below this year and possibly more.

As to price support next year, 90 percent of parity floors are pretty sure to be recommended for another year, even though under the Anderson farm bill they could be put at any level.

The decision on soybean acreage controls hinges mainly on the question of how well growers will comply with corn and cotton allotments next year, and how much of this acreage might shift to soybeans. The answer will be put off until later in the season.

Price support, procurement and disposal operations of Production & Marketing Administration involving soybeans, flax and cottonseed are being shifted from the fats and oils branch to the cotton and grain branches. Operations involving peanuts will remain in the fats and oils branch.

This means that recommendations on soybean price support and acreage goals or allotments will originate in the grain branch. It won't necessarily mean any change in policy, since final determinations are made by the CCC's board of directors.

PRICE OUTLOOK. The way officials size it up from here, it's a favorable outlook for soybeans during the 1949-50 marketing season—as long as producers market orderly and avoid gluts.

Assuming that soybeans aren't

By PORTER M. HEDGE

Washington Correspondent for
The Soybean Digest

"dumped" onto the market during the harvest period, prices are expected to hold at or above price support level this fall and winter.

Among the oilseed crops, soybeans are in a favored position. They are especially in demand by foreign countries, who this year will not be hampered in purchases by export allocations.

They also are in big demand by domestic processors, with more crushing capacity available for a crop estimated to be 16 million bushels smaller than a year ago.

Exports of soybean seed for the year ending Sept. 30 are estimated at from 20 to 25 million bushels. They are expected to be this large or larger during 1949-50, depending in part on the size of European aid appropriations.

However, some foreign representatives have indicated their governments would sacrifice on other dollar purchases, if this becomes necessary to get whole beans.

Devaluation of currencies will make soybeans higher in terms of local money than before. However, big-scale ECA and Army spending are expected to protect U. S. farmers against loss of foreign markets, at least for another season.

FAO REPORT. The United Nations' Food and Agriculture Organization has recently prepared a comprehensive report covering the immediate and longer-term outlook

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for the world's major farm commodities.

Here is what the report has to say, in part, about the fats and oils picture in general:

"Shortage of fats remains one of the most important food problems for several European countries. It may be noted that Europe during and since the war has cut back more on fats and oils for industrial than on those for edible use.

"By contrast in the United States, edible supplies have increased 10 percent since 1935-39, and industrial supplies 30 percent.

"In spite of an apparent world wide shortage, a definite change can be noted in the trend in the prices of fats and oils, both in the internal market of particular countries, notably the United States, and also in respect of products entering international trade, such as copra, ground nuts, and linseed.

"Some decline in the prices of the principal fats and oils took place between the beginning and the middle of 1949 . . . Among all the fats and oils, the falls in prices of Philippine copra and Argentina linseed oil were the most marked.

"A large and probably major part of the supplies moving to Europe consists of colonial oil and oilseeds, which are largely controlled and marketed on a government-to-government basis, either at nominal prices or on special terms of trade regarding exchange of consumer goods for imported fats.

"Although precise data are not available, it is understood that the price levels of this large tonnage do not show the same inflationary increase over prewar, as characterizes the so-called 'open' markets and similarly may have remained steadier during the fluctuations of recent months.

"It appears that a buyers' market is developing in some areas, that is in the United States and Europe where, in the face of declining prices, difficulty is being experienced in moving supplies produced or purchased during the high price period of 1948.

"One explanation of this apparent paradox of statistical deficits and market surpluses for some products is the stringent limitation of dollar and other hard currency resources in soft currency importing countries, which normally absorb 70 percent or more of world export supplies.

The current surpluses are appearing particularly in hard currency production areas."

"In the United States the outlook is for a decline in output of vegetable oilseeds and tallow, and substantially increased production of lard . . . Through ECA financing, the United States should be able to find markets for a large part of its exportable surplus of lard and other fats, the prices of which are already considerably lower than the corresponding prices in the soft currency areas."

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We invite the readers of **THE SOYBEAN DIGEST** to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

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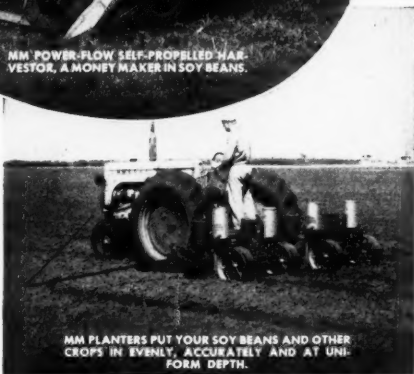
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In The MARKETS

1949 SOYBEANS TO MARKET

September was an "in-between" month for the markets as buyers waited for new-crop soybeans to begin to move.

Trading volume was light the fore part of the month and available supplies, though small, were ample to meet demand.

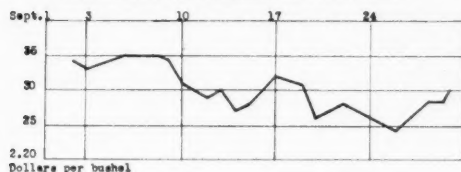
Processors went into volume production on the new crop the last week in September as beans began to move earlier than usual. Rains in some sections delayed harvesting somewhat. The earliness of the crop had a bearish effect as buyers pulled out of the market waiting for its arrival.

Both soybean oil meal and beans showed some strength the last of the month as processors had to bid up for supplies.

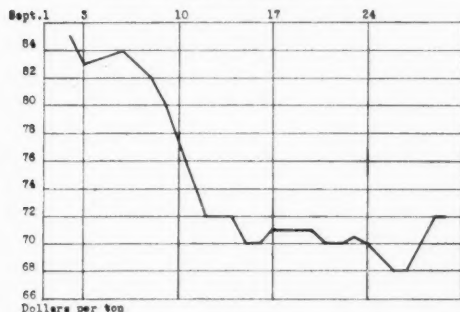
November No. 2 soybeans opened in Chicago at \$2.34 for the month and closed at \$2.23. High was \$2.35 Sept. 5-7 and low was \$2.24 Sept. 26.

Bulk soybean oil meal, basis Decatur, opened at \$35.

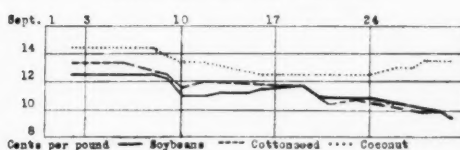
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OCTOBER, 1949

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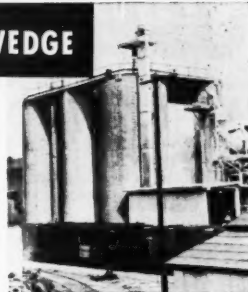
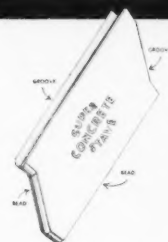
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the high and closed at \$72. Low was \$68 Sept. 25-26.

Activity in meal was about at a standstill the fore part of September. Processing was almost at full capacity late in the month with prices firm to higher. But the upward trend was meeting with some resistance.

Crude soybean oil in tankcars opened at 12.5c, the high, and closed at 10c, the low.

The growing volume movement of soybean and cottonseed oils had a depressing effect on these markets, with a sharp break in cottonseed oil the week of the 10th. The price gap between the two oils closed, and soybean oil brought the higher price during part of September.

The government bought a fair volume of crude soybean oil for November and December shipment at 93/4c a pound.

Chicago producers quoted a 1c per pound reduction in bulk shortening prices and 2c in salad oil.

NEW YORK CRUDE SOYBEAN OIL FUTURES CLOSINGS SEPT. 30*

1949, Nov., 9.95B; Dec., 9.90B; 1950, Jan., 9.84B; Mar., 9.75B; May, 9.65B; July, 9.56B; Sales 45 contracts.

*Reported by the Chicago Journal of Commerce.

MEMPHIS SOYBEAN OIL MEAL FUTURES CLOSINGS SEPT. 30*

Oct., 69.25-69.75; Dec., 65.15-66.00; Jan., 63.80-64.50; Mar., flat 62.75; May, flat 61.80; July, flat 61.25; Sales 6,400 tons.

*Reported by the Chicago Journal of Commerce.

● **FACTORY USE SOYBEAN OIL.** Factory production of crude soybean oil totaled 155,148,000 lbs. in July; 150,583,000 lbs. in June. Production of refined oil totaled 110,190,000 lbs. in July; 124,209,000 lbs. in June.

Factory consumption of crude soybean oil in July totaled 122,032,000 lbs.; in June 135,495,000 lbs. Consumption of refined soybean oil in July totaled 97,345,000 lbs.; in June 120,798,000 lbs.

Factory and warehouse stocks of crude soybean oil July 31 totaled 90,881,000 lbs.; June 30 82,793,000 lbs. Stocks of refined soybean oil July 31 totaled 92,807,000 lbs.; June 30 93,929,000 lbs.

Uses of the crude soybean oil in July other than refining included: soap 79,000 lbs., paint and varnish 221,000 lbs.; lubricants and greases 72,000 lbs.; other inedible products 951,000 lbs.

Uses of refined soybean oil: shortening 21,826,000 lbs.; margarine 1,015,000 lbs.; other edible 7,200,000 lbs.; paint and varnish 6,500,000 lbs.; chemicals 502,000 lbs.; lubricants and greases 11,000 lbs.; linoleum and oilcloths 2,366,000 lbs.; other inedible products 3,569,000 lbs.

● **SOYBEAN STOCKS.** Production and Marketing Administration's commercial grain stock reports for Aug. 30—Sept. 27.

(1,000 bu.)

	Aug. 30	Sept. 6	Sept. 13	Sept. 20	Sept. 27
Atlantic Coast	368	417	477	264	402
Gulf Coast	38	38	486	85	103
Northwestern and Upper Lake		0		0	
Lower Lake	259	201	118	114	105
East Central	44	69	27	14	22
West Central					
Southwestern & Western	3	2	1	1	3
Pacific Coast		0		0	
Total current week	712	727	1,109	478	635
Total year ago	217	133	94	52	64

SOYBEAN DIGEST

● **OIL MILL PRODUCTS.** Reported by Bureau of Census, Department of Commerce.

SOYBEANS: RECEIPTS, CRUSHINGS AND STOCKS AT OIL MILLS, BY STATES, JULY 1949—JUNE 1949

State	(Tons of 2,000 pounds)		Crushed or used		Stocks at mills	
	July 1949	June 1949	July 1949	June 1949	July 31, 1949	June 30, 1949
U. S.	283,378	318,166	459,061	457,914	374,316	549,999
Arkansas	(*)	(*)	7,133	8,636	(*)	(*)
Illinois	110,677	129,137	194,203	188,239	141,617	225,143
Indiana	19,695	26,575	33,962	38,511	22,960	37,227
Iowa	71,109	68,651	84,398	81,345	59,239	72,528
Kansas	8,878	8,827	9,635	11,347	8,666	9,423
Kentucky	5,173	6,270	10,502	13,166	18,681	24,010
Minnesota	11,535	9,462	19,193	14,076	6,613	14,271
Missouri	9,512	19,104	19,739	23,399	30,614	40,841
Nebraska	(*)	(*)	5,238	(*)	(*)	(*)
North Carolina	849	817	1,812	1,951	2,340	3,303
Ohio	38,832	42,079	65,032	53,889	64,446	90,645
Oklahoma				(*)		
Texas						
All other	7,118	7,244	18,452	18,117	19,141	32,608

* Included in "All other" to avoid disclosure of individual operations.

SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, JULY 1949—JUNE 1949

State	LOCATIONS, BY STATES, JULY 1949-JUNE 1949							
	Crude oil (thousand pounds)		Cake and meal (tons)					
	Production	Stocks	Production	Stocks				
	July 1949	June 1949	July 31, 1949	June 30, 1949				
U. S.	155,148	150,583	45,624	39,260	357,592	355,935	21,266	17,494
Arkansas	2,124	2,535	712	2,253	5,766	6,620	679	395
Illinois	66,714	63,930	17,320	12,338	143,553	140,758	6,693	5,620
Indiana	11,267	12,713	4,524	2,585	26,953	30,504	1,931	1,199
Iowa	29,383	27,360	10,126	6,911	69,608	66,067	3,387	2,173
Kansas	3,172	3,598	921	1,641	7,926	9,327	(*)	(*)
Kentucky	3,832	4,643	(*)	836	8,315	10,395	283	421
Minnesota	6,209	4,546	1,388	1,824	15,538	11,591	472	(*)
Missouri	6,439	6,658	1,519	1,861	15,981	17,299	1,948	934
Nebraska	(*)	1,601	(*)	322	(*)	4,381	(*)	(*)
N. Carolina	446	547	1,070	1,008	1,329	1,622	385	1,019
Ohio	21,523	17,501	5,287	3,994	51,425	42,967	2,921	2,275
Oklahoma		(*)		(*)		(*)	(*)	(*)
Texas		(*)		(*)		(*)	(*)	(*)
All other	4,039	4,951	2,757	3,687	11,198	14,404	2,667	3,458

* Included in "All other," to avoid disclosure of individual operations.

* Included in "All other" to avoid disclosure of individual operations.

PRIMARY PRODUCTS EXCEPT CRUDE OIL, AT CRUDE OIL MILL LOCATIONS: PRODUCTION, SHIPMENTS AND TRANSFERS AND STOCKS, JULY 1949—JUNE 1949

Products	Production		Shipments and transfers		End of month stocks	
	July 1949	July 1949	June 1949	June 1949	July 31, 1949	June 30, 1949
SOYBEAN:						
Cake and meal ¹	357,592	355,935	353,820	363,197	21,266	17,494
Lecithin ²	1,020,937	1,112,335	1,033,995	1,131,718	1,092,557	1,106,515
Edible soy flour,						
full fat ³	(*)	486	(*)	463	109	187
Edible soy flour,						
other ³	8,742	5,448	8,688	5,978	1,548	1,494
Industrial soy flour ¹	(*)	(*)	(*)	(*)	(*)	(*)

¹ Unit of measure in tons.

² Unit of measure in pounds.

³ Not shown to avoid disclosure of individual operations.

● **INSPECTIONS.** Inspected receipts of soybeans for October through July totaled 99,856 cars, an increase of 27 percent over the total of 78,559 cars for the same months last season when the crop was 8 percent smaller, according to reports to the Department of Agriculture. Seventy-four percent graded No. 2 or better compared with 87 percent a year ago.

July inspections were the largest of record for the month and totaled 6,153 cars. The average for the month of July for the crop years 1942-46 was 2,675 cars. The quality of the soybeans marketed in July remained about the same as in May and June 75 percent grading No. 2 or better.

● **FUTURES TRADING.** A big increase in the volume of futures trading in soybeans on the Chicago Board of Trade in the year ending June, 1949 as compared with 1948 is reported by the Commodity Exchange



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Authority. A substantial increase in trading in soybean oil meal futures on the Memphis Merchants Exchange was also reported.

Volume of futures trading in soybeans in the year ending June 30, 1949 was 1,537,661,000 bu., compared with 40,162,000 bu. for a year earlier. Soybean oil meal futures traded totaled 474,700,000 tons for the year ending June 30, compared with 412,000 tons a year earlier.

No trading in soybean oil futures was reported. For the year ending June 30, 1948, 900,000 lbs. were reported.

● **SOYBEAN GLUE.** Consumption of soybean glue by the softwood plywood industry in July was 1,532,000 lbs. compared with 2,717,000 lbs. in June; and 1,751,000 lbs. in July 1948, reports Bureau of the Census.

Consumption of phenolic resin glue was 1,764,000 lbs. in July. Total consumption of all glues by the plywood industry in July was 3,697,000 lbs. compared with 5,993,000 lbs. in June and 5,204,000 lbs. in July 1948.

Stocks of soybean glue totaled 1,327,000 lbs. July 31 compared with 1,340,000 lbs. June 30 and 1,734,000 lbs. July 31, 1948.

● **SOYBEAN OIL ANALYSIS.** Average refining loss of extracted soybean oils for the 1948-49 crop year was 4.3%, reports Woodson-Tenent Laboratories, Memphis, Tenn.

The report is based on soybean oils processed throughout the country and analyzed by Woodson-Tenent from Sept. 20, 1948 through Sept. 20, 1949. Average Expeller refining loss was 5.9%.


The complete report follows, showing the average refining loss and bleached color of soybean oils analyzed by the Laboratory:

Extracted		Extracted Degummed	
Refining Loss	4.8%	Refining Loss	2.1%
Bleached Color	1.6 red	Bleached Color	1.8 red
Expeller		Expeller Degummed	
Refining Loss	5.9%	Refining Loss	2.9%
Bleached Color	2.6 red	Bleached Color	2.5 red

● **SHORTENING SHIPMENTS.** Reported by Institute of Shortening and Edible Oils, Inc., in pounds.

Week ending Aug. 27	8,595,210
Week ending Sept. 3	8,433,263
Week ending Sept. 10	5,250,621
Week ending Sept. 17	3,458,689
Week ending Sept. 24	5,215,695

Grand total of shortening and edible oil shipments for August was 321,176,000 lbs.



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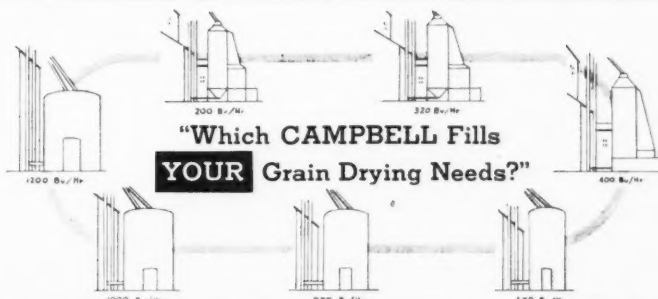
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THE SOYBEAN DIGEST -- INDEX TO VOLUME IX

(Subject Index)

A	
Acorn, O. H.	No. 5, p. 17
Adams, A. New Soybean	No. 2, p. 14
Alcohol Extraction	No. 7, p. 20; No. 7, p. 43
Allergy, food	No. 3, p. 39
American Soybean Association, Field Program of	No. 11, p. 52
APF, Gains with No. 9, p. 41; APF May Increase Soybean Usage	No. 6, p. 36
Army Pioneered Minnesota Soybeans	No. 10, p. 27
B	
Bean in the Deep South	No. 11, p. 12
Blithville, Remington Soybean Shows	No. 3, p. 20
Bread, Soy Flour in	No. 9, p. 20, 40
Britain, Soybean Trials in	No. 5, p. 34
C	
California, Soybean Experiments in	No. 8, p. 14
Canadian Oil Seeds Processing Industry	No. 4, p. 31
Canned Soybeans	No. 3, p. 38
Castor Beans	No. 3, p. 22
Chemical Composition of Soybeans, Weather Damage on	No. 1, p. 37
China, Fermented Products in	No. 5, p. 26
Chinese Foods No. 6, p. 37; Chinese Institutions No. 6, p. 23	No. 6, p. 23
Citric Acid Improves taste of soybean oil in Dressings	No. 2, p. 20
Cocoa and Soybeans	No. 3, p. 38
Composition, Effect on price of beans and oil	No. 4, p. 20
Corn-Soy Rows Produce More Paired	No. 7, p. 10
Crop report No. 1, p. 29; No. 8, p. 23; No. 9, p. 34; No. 10, p. 21; No. 11, p. 96; No. 12, p. 25	No. 12, p. 25
Cystine and Soybeans	No. 5, p. 44
D	
Dairy Feed, Protein level in No. 5, p. 42; Dairy Nutrition, Protein Feeding	No. 9, p. 42
Defoliation	No. 4, p. 31
Delwiche, Early Worker with Soybeans	No. 5, p. 41
Disease Problem No. 6, p. 27; Diseases of Soybean, Two Viruses, Causing No. 6, p. 29; Diseases of Soybean, Seed-Borne No. 4, p. 31; Diseases in Virginia, Alfalfa and Soybean	No. 9, p. 42
Dortchsoy 31, New Soybean	No. 6, p. 22
Drying Oils	No. 10, p. 28
E	
Early Experiences with Soybean	No. 1, p. 14
European Occupied Areas, Soy Flour in	No. 11, p. 44
Experiments in California, Soybean	No. 8, p. 14
Extraction of Soybean Protein with Sulfurous Acid	No. 10, p. 29; No. 12, p. 31
F	
FAO Oilseed Mission for Venezuela	No. 12, p. 30
Farm Crop Storage	No. 7, p. 44
Farm Storage of Soybeans	No. 10, p. 11
Fats and Oils, Outlook for	No. 6, p. 15
Feeding Laying Hens, Protein Level Factor No. 4, p. 42; Feeding Soybean Oil Meal No. 2, p. 19; Feeding Whole Soybeans	No. 5, p. 44
Fertility Level, Soybeans and the	No. 11, p. 58
Fertilizers No. 1, p. 36, 37; No. 3, p. 40; No. 6, p. 10; No. 6, p. 18; No. 7, p. 22; No. 11, p. 104	No. 11, p. 104
Fermented Products in China	No. 5, p. 26
Field Program of ASA	No. 11, p. 52
G	
Flavor Stability of soybean oil, Research on	No. 11, p. 48
Flaming Beans	No. 11, p. 16
Flour, Soy Study	No. 2, p. 24
Food Allergy	No. 3, p. 39
Food Economy of Germany, Soybeans in the	No. 11, p. 48
Food Products, Soybean Oil in	No. 3, p. 28
Fungi that Poison Soybeans	No. 6, p. 37
Future of Oil Seed Crops	No. 12, p. 30
H	
Gains with APF	No. 9, p. 41
Gelsosy, new product	No. 9, p. 31
German Association, Soybeans Promoted by	No. 3, p. 50
German Butchers Sell New Soy Food	No. 7, p. 32
Germany, Soybeans in Food Economy of	No. 11, p. 46
Glues, Soybean and Phenolic	No. 1, p. 16
Glue, Soybean	No. 5, p. 45
Goitrogenic Properties of Soybeans	No. 11, p. 104
Grits, Soy and Heat	No. 3, p. 38
Growth Factor with Chick Rations	No. 7, p. 42
Guar, a Coming Crop	No. 10, p. 20
I	
Harvest Losses in Soybeans	No. 12, p. 14
Hatchability Factor in soybean Oil Meal	No. 2, p. 29
Hail Damage, Effect of, to Soybeans	No. 7, p. 42
Heat and Soy Grits	No. 3, p. 38
Higher Yields for Greater Profits	No. 8, p. 12
Hybridization in Soybeans	No. 5, p. 45
J	
Inoculation Does for Soybeans, What	No. 11, p. 62
Iodine, Lack of in Nutrition of Farm Animals	No. 7, p. 44
Institution food, Soybeans in	No. 3, p. 39
K	
Japan, Soybeans in	No. 12, p. 18
L	
Lack of Iodine in Nutrition of Farm Animals	No. 7, p. 44
Lamb Feeding, Soybean oil meal in	No. 3, p. 40
Land, What Soybeans Do to	No. 7, p. 15
Lecithin	No. 3, p. 39, 40
Legumes and heat	No. 3, p. 38
Life Members, ASA, 1949	No. 11, p. 36
Lysine in Soybean Oil Meal	No. 5, p. 44
M	
Margarine, Ban on Yellow No. 1, p. 22; Margarine Drive in States No. 4, p. 26; Four States Repeal Margarine Laws No. 5, p. 39; Margarine Tax Repeal No. 2, p. 34; Margarine Repeal Outlook Brighter No. 6, p. 32; Margarine Has More Stability No. 6, p. 45; Margarine on Sale in Canada No. 3, p. 26; Margarine Market, Soybean Oil is Losing No. 3, p. 4; Margarine Repeal, Final Drive for No. 7, p. 36; Yellow Ban Repealed in California No. 9, p. 32; Kill Margarine Bill HR 2023	No. 12, p. 22
Meal as Sole Supplement	No. 2, p. 28
Methionine, Cystine	No. 9, p. 40
Mill Operators Manual	No. 4, p. 31
Minneapolis Grain Exchange	No. 11, p. 68
Missouri and Arkansas, "double duty land"	No. 3, p. 18
Missouri's "Mr. Soybean"	No. 5, p. 17
Moisture Test	No. 2, p. 28
Monroe, for Northern Ohio	No. 5, p. 18
N	
New soybean varieties, How to Introduce	No. 1, p. 18
Nutrition, Importance of the Soybean in	No. 2, p. 16



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Oil Seed Crops, Future of	No. 12, p. 30
Oldtimers in the Soy Industry	No. 1, p. 20
Ontario Experiment Station, Breeding Work at	No. 1, p. 18
Ontario, Soybeans in	No. 11, p. 56
Oriental Farming Practices, Japan No. 7, p. 24; Korea	No. 8, p. 15
Oriental use of Soybeans as Food	No. 4, p. 15
Ototoon and Arkasoy, Introduced	No. 2, p. 27
Outlook for Soybeans in 1949	No. 11, p. 70
P	
Paint, Soybean Oil in No. 1, p. 36; Paints from	No. 3, p. 16
Soybean Oil	No. 3, p. 16
Paired Corn-Soy Rows Produce More	No. 7, p. 10
Paper Coatings	No. 1, p. 36
Plant Protein Ration for Pigs	No. 8, p. 28
Production in Kentucky, Soybean	No. 11, p. 104
Production, World Soybean	No. 3, p. 32
Processing Edible Fats	No. 4, p. 30
Processor Meeting	No. 7, p. 18
Protein Feeding-Dairy Nutrition No. 9, p. 42; Protein Level	No. 5, p. 42
in Feeding Laying Hens No. 5, p. 42; Protein Level in	No. 5, p. 42
Dairy Feed	No. 5, p. 42
Purchasing Soybeans, Factors to be considered No. 9, p. 24	No. 9, p. 24
R	
Remington, Ind., Soybean Show	No. 3, p. 20
Research on Flavor Stability of soybean oil	No. 11, p. 48
Resolution, American Soybean Association	No. 11, p. 83
Reversion Cause	No. 6, p. 25
Root Rot of soybeans	No. 11, p. 54
Roughage Digestion in Cattle, Influence of	No. 8, p. 28
Soybean Oil Meal	No. 8, p. 28
Secretary-Treasurer Report American Soybean	No. 11, p. 79
Association	No. 11, p. 79
Solvent Extraction, Literature Search on	No. 4, p. 29
Seed-Borne Diseases of Soybean	No. 4, p. 31
Solvent vs. Expeller Meals	No. 2, p. 28; No. 10, p. 28
South, Beans in	No. 11, p. 12
Soybeans in Food Allergy No. 3, p. 39; in America No. 4, p. 30;	No. 3, p. 39; in America No. 4, p. 30;
Are Worth More No. 11, p. 37; Boom in Missouri Boot-heel	No. 11, p. 37; Boom in Missouri Boot-heel
No. 1, p. 12; Place of in Farm plan No. 8, p. 28; Glue, No.	No. 1, p. 12; Place of in Farm plan No. 8, p. 28; Glue, No.
5, p. 15; Festivals No. 1, p. 11; Festivals in 1949 No. 11, p.	5, p. 15; Festivals No. 1, p. 11; Festivals in 1949 No. 11, p.
22; Fertilization in Indiana No. 6, p. 18; Inside Story of	22; Fertilization in Indiana No. 6, p. 18; Inside Story of
No. 3, p. 13; in Minnesota No. 2, p. 26; in Ontario No. 11, p. 56;	No. 3, p. 13; in Minnesota No. 2, p. 26; in Ontario No. 11, p. 56;
In Puerto Rico, No. 1, p. 38; Standards No. 11, p. 74;	In Puerto Rico, No. 1, p. 38; Standards No. 11, p. 74;
In Texas Blacklands No. 9, p. 18; Trials in Britain No. 5, p.	In Texas Blacklands No. 9, p. 18; Trials in Britain No. 5, p.
34; Protein Free from Phosphorus No. 12, p. 30;	34; Protein Free from Phosphorus No. 12, p. 30;
In Japan	No. 12, p. 18

INDEX OF CONTRIBUTORS

A	
Andrews, Stanley	No. 11, p. 41
Arnold, L. K.	No. 12, p. 11
B	
Babcock, Glen E.	No. 1, p. 16
Banks, Heartsill George	No. 3, p. 18
Barger, E. L.	No. 12, p. 11
Beckel, Arthur C.	No. 2, p. 20
Bening, William	No. 11, p. 46
Brierley, R. G.	No. 11, p. 44
Browning, G. M.	No. 11, p. 58
Burlison, W. L.	No. 3, p. 22
C	
Calland, J. W.	No. 7, p. 15
Carter, Deane G.	No. 10, p. 14
Cowan, J. C.	No. 1, p. 16; No. 11, p. 48
Culbertson, Raymond E.	No. 8, p. 14
D	
Dju, Dsil-Chwen	No. 5, p. 22
E	
Erdman, Lewis W.	No. 11, p. 62
F	
Fairchild, David	No. 1, p. 14
Fosbrink, R. H.	No. 10, p. 20
G	
Gabby, J. L.	No. 2, p. 18
Goss, Warren H.	No. 3, p. 28
H	
Hartwell, A. M.	No. 11, p. 68
Hendel, Dr. Julius	No. 11, p. 38
Hedge, Porter M.	No. 1, p. 44; No. 2, p. 24;
No. 3, p. 48; No. 4, p. 40; No. 5, p. 32;	No. 3, p. 48; No. 4, p. 40; No. 5, p. 32;
No. 6, p. 44; No. 7, p. 52; No. 8, p. 36;	No. 6, p. 44; No. 7, p. 52; No. 8, p. 36;
No. 9, p. 50; No. 10, p. 36; No. 11, p. 114;	No. 9, p. 50; No. 10, p. 36; No. 11, p. 114;
No. 12, p. 38	No. 12, p. 38
Holman, Leo E.	No. 12, p. 38
Hughes, Paul C.	No. 11, p. 52
Humphrey, Dr. L. M.	No. 6, p. 22
I	
Ingles, W. L.	No. 11, p. 74
K	
Kalton, Robert R.	No. 9, p. 18
Kernkamp, M. F.	No. 11, p. 54
Klemme, Arnold W.	No. 7, p. 22
Kurakake, T.	No. 12, p. 18
L	
Lewis, A. J.	No. 3, p. 16
Lyman, J. F.	No. 2, p. 16
M	
McCaughn, J. R.	No. 8, p. 14
McKay, Clive M.	No. 5, p. 22; No. 9, p. 20
McMillen, Dale W., Jr.	No. 9, p. 24

Miller, L. C.	No. 3, p. 13
Milner, R. T.	No. 4, p. 20
Morrison, F. B.	No. 5, p. 35
O	
Owen, C. W.	No. 1, p. 18; No. 11, p. 56
P	
Pellet, Kent	No. 1, p. 12
Pond, George A.	No. 6, p. 15
Prichard, George L.	No. 11, p. 70
Probst, A. H.	No. 5, p. 20; No. 6, p. 18
R	
Roberts, Ivan	No. 8, p. 12
Robinson, R. G.	No. 11, p. 64
S	
Saboe, Lewis C.	No. 5, p. 18
Skovholt, Oscar	No. 11, p. 50
Smith, Allan K.	No. 4, p. 15; No. 5, p. 26;
No. 6, p. 23; No. 7, p. 24; No. 8, p. 14	No. 6, p. 23; No. 7, p. 24; No. 8, p. 14
Strayer, Geo. M.	No. 12, p. 79
V	
Vestal, C. M.	No. 4, p. 18
Von Schuh, Dr. Wolfgang	No. 3, p. 50
W	
Wadley, Ersel	No. 10, p. 11; No. 12, p. 31
Weber, Charles R.	No. 2, p. 14
Weibel, R. O.	No. 3, p. 22
Weiss, Martin G.	No. 2, p. 14

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946.

Of The Soybean Digest, published monthly at Hudson, Iowa, for September 30, 1949.

State of Iowa, County of Blackhawk, ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Kent Pellett, who, having been duly sworn according to law, deposes and says that he is the managing editor of the SOYBEAN DIGEST and that the following is, to the best of his knowledge and belief, a true statement

Soy, Cottonseed Meal, Comparison of	No. 7, p. 42
Soybean Meal, Vitamin Supplements in	No. 7, p. 43
Soy Milk and Curd, Biological Value of	No. 12, p. 30
Soy Grits, Heat and	No. 3, p. 38
Soy Flour Bread	No. 9, p. 20, 40
Soy Flour in European Occupied Areas	No. 11, p. 44
Soy Food, Germany Butchers Sell	No. 7, p. 32
Soy Processing and Transportation	No. 10, p. 28
Soy Sauce in China	No. 5, p. 26
Soya-Tung Oil	No. 3, p. 40
Stuck out Your Chest	No. 3, p. 18
Storage Cost No. 10, p. 6; Farm Crops No. 7, p. 44; of Soybeans	No. 10, p. 14
Sulfurous Acid, Extraction with	No. 10, p. 29
Swine Supplements, Soybean meal as	No. 4, p. 18
Synthetic Emulsifier, Effect on Soybeans	No. 11, p. 50
T	
Texas Blacklands, Soybeans in	No. 9, p. 18
Trichloroethylene, New Equipment For Extracting Soybean	No. 12, p. 11
Tri-State Processors Meeting	No. 6, p. 20
Trypsin Inhibitor	No. 2, p. 29
Twenty-Ninth Convention, American Soybean Association	No. 11, p. 30
U	
Use of Soybean in Industry and Agriculture	No. 2, p. 18
Utilization of Vegetable Proteins by Chickens	No. 9, p. 40
V	
Variety Tests in Oklahoma	No. 11, p. 104
Vegetable Protein Concentrates in Chick Feed	No. 5, p. 42
Vegetable Proteins, Utilization of by Chickens No. 9, p. 40;	No. 9, p. 40;
Vegetable Protein Sources for Poultry	No. 9, p. 42
Vegetable Soybean Varieties at Delta Station	No. 7, p. 44
Venezuela, FAO Oilseed Mission for	No. 11, p. 30
Versatile Soybean	No. 2, p. 18
Vigor and Viability in Soybeans	No. 5, p. 22
Viruses Causing Diseases of Soybean	No. 8, p. 29
Vitamin supplements in Soybean Meal	No. 7, p. 43
W	
Wabash Soybeans	No. 5, p. 20
Washington Digest No. 1, p. 44; No. 2, p. 34; No. 3, p. 48; No.	No. 1, p. 44; No. 2, p. 34; No. 3, p. 48; No.
4, p. 40; No. 5, p. 52; No. 6, p. 44; No. 7, p. 52; No. 8, p. 36;	4, p. 40; No. 5, p. 52; No. 6, p. 44; No. 7, p. 52; No. 8, p. 36;
No. 9, p. 36; No. 10, p. 36; No. 11, p. 114; No. 12, p. 30	No. 9, p. 36; No. 10, p. 36; No. 11, p. 114; No. 12, p. 30
Weed Control in Soybeans	No. 11, p. 64
World Fats, Oils picture, Soybeans in the	No. 11, p. 38
World Food Round-up	No. 11, p. 41
World Oilseed Picture	No. 4, p. 29
Z	
"Zest," soy product	No. 2, p. 22

of the ownership, management, etc. of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (sections 537, Postal Laws and Regulations), printed on the reverse of this form, to wit:

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher: American Soybean Association, Hudson, Iowa.
Editor: Geo. M. Strayer, Hudson, Iowa.
Managing Editor: Kent Pellett, Hudson, Iowa.

Business Manager: George McCulley, Hudson, Iowa.

2. The owner is: American Soybean Association, Hudson, Iowa, an educational organization operating under the Iowa law as a corporation not for pecuniary profit, of which no member or individual owns or holds more than 1 percent of the stock.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

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KENT PELLETT,
Managing Editor

Sworn to and subscribed before me this 22nd day of September, 1949.

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